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It is our aim, our ambition, our aspiration even, to build our journal worthily and well, not for the hour only, but for future years; for the few men in the forefront of an enduring and a laborious art; for the disciplined ranks of a distinguished profession; for the young men—Architects to be—and for all who love a clustered column or a flying buttress, a traceried window or a Greek frieze; for the man, too, who honestly plumbs a jamb.

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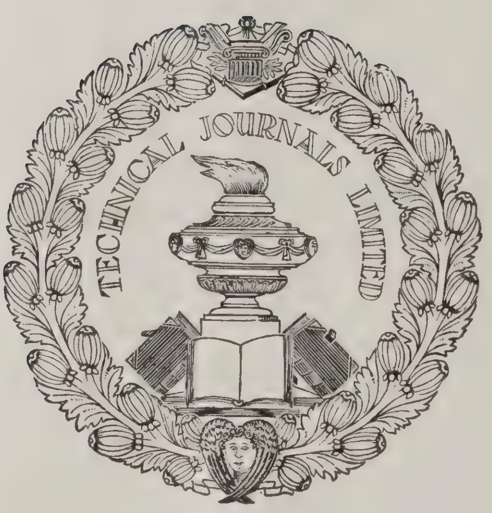
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IT would have been very delightful if M. Henri Paul Nénot could have been present to receive the Royal Gold Medal personally, but unfortunately he was indisposed, and we were deprived of the pleasure of seeing and hearing him, and of according him a reception that would have expressed more than our admiration for the achitect of the Sorbonne. It would have conveyed, however inadequately, our intense pride in our friendship with the gallant French nation, with whom, as Mr. Ernest Newton finely said in presenting the medal, a bond that can never be broken has been cemented with the blood of our sons. What we owe—what the world owes—to French architecture is patent in every capital city; and the war has revealed more clearly the fine spirit in which that architecture has been conceived. Elegance and *aplomb*, grace and gaiety, an intuitive perception of the right thing to do in every instance and in every situation, invest French buildings with the peculiar charm of the French people, and we do but follow in their wake as the Romans followed the Greeks. It will be surprising if, after the war, we do not drink more copiously and more confidently at this fountain, and the Royal Gold Medal goes across the Channel as a token of our intensified sense of obligation to French art and the French genius in war and peace.

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Sir T. G. Jackson, in a further letter to "The Times," has explained his attitude towards art critics. He does not "blame the critic for expressing his own views in print, unless he poses as an arbiter of taste to whose judgment an ignorant public must submit." He rather blames "the public for listening to him, and taking him for a prophet, and following his lead instead of thinking for themselves." Surely the day when the critic posed as an arbiter of taste has gone by. The critic of to-day advances no such pretensions. He states his views for what they are worth, without thought of posing as a prophet or of being regarded as a lawgiver by a band of infatuated disciples. Probably John Ruskin was the last in this Levitical line, and the cult has died out because there was none worthy to assume his mantle, or because the Whistler case gave people furiously to think, and thinking is the death of idol worship. At all events, the Grand Panjandrum system no longer holds. No living critic has the power that Ruskin wielded (until, in the case of Whistler, he abused it) of making or marring the reputation of an artist; nor has any particular "school" of criticism that power. Sir T. G. Jackson therefore seems to be talking reminiscently.

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If there is no master, there can be no disciples, and Sir Thomas should not blame the public of to-day for the infatuations of their predecessors of the day before yesterday. We are not forgetting that Mr. Lisle March Phillipps is not long dead. Undoubtedly he was widely read, but less, we think, for his thesis than for his admirable gift of suave expression. One may still read Buffon without caring a fig for natural history; and March Phillipps also was read for his captivating style. That the excuse for it happened to be architecture was merely incidental and negligible. Sir Thomas's exhortation to the public to "study works of art independently" of the *ipse dixit* of the critic is to a great extent superfluous, because the public read for amusement rather than for instruction—a fact that the modern art critic feels in his bones. Even your ardent Post-Impressionist, Cubist, Vorticellist, Futurist, or what not, is aware of the hopelessness of writing to make converts. He knows that the more wildly extravagant he is, the more the public will be glad to read him—that they will remember his epigrams and paradoxes, but will forget the application thereof.

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Replying to Mr. Spielmann's lugubrious contention that if the critics were stopped from writing there "would be silence, and in silence there is degeneration, decay, and death," Sir Thomas observes that "there does not appear to have been any critical writing about art when it was at its best; at Athens in the time of Pericles, at Florence in that of Lorenzo, or in the Middle Ages, when our cathedrals were being built." Alas, there were then no art magazines and no halfpenny newspapers. If the art critic of the Periclean period disseminated his ideas through the agency of baked bricks, he probably wrote with all the caution born of a consciousness that a hardware book is a hefty thing to hurl at an offending censor's head. He knew that any opinions he ventured to express would carry weight. Sir Thomas's assumption that there was no criticism in the days of Pericles shall be taken with a pinch of Attic salt.

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So, also, shall be taken his averment that artists learn from each other, but not from the critics. If they are wise, they will pick up pearls as pigeons pick up peas—wheresoever they may find them. And if artists profit by criticising each other, and, as Sir Thomas declares, by no other sort of criticism, why all this nervous dread of the professional critic? Why slate him and deny him his function? It is a mere affectation that artists ignore him. Most of them haunt his doorstep and hang on his lips, because they know that he is in a position to tell them what the outside public are thinking of their work. When he tells them what is wrong with it, they are bitterly chagrined, and ap to their wounds the flattering unction that he has not the least idea what he is talking about, and ought to be consigned to limbo or a lethal chamber. Why artists are so much less tolerant of criticism than are men of letters (who are no less sensitive) should be quite obvious. Artists are rarely able to amend their errors in a later edition of the same work, and it is most annoying to be told of faults that cannot be rectified. A writer accepts corrections cheerfully, and even invites them, because he can give them effect in his later editions. But how shall an architect display his list of corrigenda? Imagine such a list to be cast in bronze and affixed to the façade of some monumental building! Item: "Owing to a builder's error, the columns of the portico have been fluted, although the architect wished them to be kept plain." Item: "The insignificance of the cornice is due to the parsimony of the proprietor, who at the last moment cut out £50 on the cost as originally estimated, and thus beggared the entire street." Item: "The architect disclaims all responsibility for the gimcrack ornamentation of the frieze, an outrage that has been perpetrated without his knowledge or consent." No; the architect has no such means of setting himself right with the critics when the faults of his work are disclosed, and therefore one can understand and forgive his aversion to

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criticism. His sins are ever before him, and are past praying for. In these circumstances it is almost a sin to tell him of them.

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To return to Sir Thomas Jackson's letter. The gravamen of his charge seems to be that the critics have not helped us to avoid the folly of estimating the value of a picture at £20,000 if a distinguished artist painted it, and at about twopence-halfpenny if it was found to be the work of a less known man. Here, however, Sir Thomas has hit upon an insoluble problem, which he would appear desirous of solving by leaving out a vital factor—that of personality, or of human associations. He relates an interesting anecdote in proof that the interest in a thing is mainly subjective. "I remember," he says, "how an emotional young lady, looking out of the train near Waterloo Station, espied a dome which she took to be that of St. Paul's. 'How it warms the heart,' she exclaimed, 'to see that beautiful dome!' Had she known that what she saw was really the dome of Bedlam, she would not have felt that cordial glow. So the heart of the joyful possessor of a fancied Romney grew cold when his picture was proved to be by Humphry, and he straightway returned it to the dealer. In neither case was there any genuine pleasure in the view or the picture, but only the imaginary delight awakened by a name." This conclusion admits of certain reservations. It begs a question that has never been, and never can be, determined. You cannot eliminate the personal equation, nor yet delimitate it: and there is no known means of ascertaining absolute value. The value of a picture or a building is, after all, the value—various and casual—set on it by the observer. Has Sir Thomas momentarily forgotten the lesson of Peter Bell and the primrose? or the coarse hint of Kipling about "a rag, a bone, and a hank of hair"? The picture-owner invested the painting with the genius and personality of Romney, and rejoiced in it. Otherwise it became, for him, an unblessed union of paint and canvas. Similarly, but for the emotions it brings us, St. Paul's is but a mass of stone blocks, which (could we but consider them apart from the human interest with which they have been invested) had looked vastly better if they had been left unwrested from their native bed. But the architect has humanised them, and the process has been carried on by time and event until the building cannot be considered apart from its human associations.

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In other words, no work of art can be purely objective, and no two persons can view it with exactly the same degree and quality of subjectivity. Hence it has no absolute value. It is worth to you what you feel it is worth, and its value will therefore fluctuate with the person, with the period, with the accretion of human associations, and with the very variable knowledge of them and the power of reconstructing them. Of course Sir Thomas Jackson is well aware of all this; but he writes as if he had momentarily forgotten it. Also the real objective value—conformity to certain laws (mostly inexplicable) of proportion and the like—upon which trained minds are pretty generally agreed—has not been here overlooked; nor has the fact that subjective observation is of mixed character—is partly objective, partly intellectual, and in great part emotional. Altogether, a reasoned view of the facts, of which this is a rather casual and a very incomplete restatement, seems to justify the position of the professional critic rather than Sir Thomas's disdain of him.

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Churches in the City of London have a habit of melting away, leaving, however, a little residuum in the socket. This is what is about to happen to the church of St. Alphage, London Wall. It is to be pulled down, all but what remains of the fourteenth-century tower, while the modern porch will also be retained. There is some doubt as to who was the architect of the modern portion of the church, which was built in 1777, probably from designs by Dance, on the site of the old hospital or priory of St. Mary the Virgin, founded for the sustentation of one hundred blind men in 1532. Although the church is of no great architectural value, its disappearance will deprive the district of another of the few remaining relics of its period, when the trader lived over his shop, and on Sundays went to his parish church. Now the world is his parish, or it was so before the war made travelling difficult, and the train or the motor enables him to put daily and swiftly a distance of fifty miles or more between his home and his ledgers: and if all the City churches had been allowed to stand, there would now be more parsons than lay church-goers in the City on Sundays. But the same swiftness of transport has created also the overseas commerce which makes merchants wealthy, and puts them in keen competition for business sites that have consequently grown so immensely costly that superannuated churches may not occupy them.

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Usually the demolished church is commemorated by some small monument set up on or near its site. Sometimes this is merely a tablet grudgingly accommodated on the wall of a warehouse; sometimes it is a funereal-looking monument on which is carved a sketchy likeness of the church. One rather large monument, in a back alley on the southern side of Cannon Street, near the Mansion House Station, is no mere cenotaph · for the inscription bears that when the church was demolished in the interests of the Underground Railway, the human remains about it were carefully collected and lumped together in this tomb! One honours the intention rather than the deed, and sighs for the cold neglect of good old Sir Thomas Browne's essay on "Hydriotaphia, or Urn Burial," which was published in 1658, and is more heeded for its style than for its substance. Although one associates him mainly with Norwich, where he was knighted on the occasion of a royal visit in 1671, and where there is a fine modern statue to him—erected, if memory serves us, in 1905, in celebration of the tercentenary of his birth—he was the son of a citizen of London. In the churchyard of St. Alphage there is a fragment of the London Wall from which the district derives its name, and this relic, if it survives, will no doubt be jealously preserved.

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We have become more careful in such matters than were the City Fathers who, towards the close of the eighteenth century, remorselessly pulled down the Barber-Surgeons' Hall, which had been built by Inigo Jones in 1636, in Monkwell Street, within sight of St. Alphage. The "theatre" of this hall was, in the opinion of Horace Walpole, one of the finest of Inigo Jones's works; but its materials, instead of being carefully numbered, as they would be to-day, for rebuilding elsewhere, were sold at housebreaking and heart-breaking prices. What became, one wonders, of the "figures of the seven liberal sciences, the twelve signs of the zodiac, and a bust of King Charles I."? If Jones designed them, we may be very sure that they were worth preserving, for his incomparably vigorous sketches, which Michelangelo himself had hardly bettered, reveal the father of English architecture as a past-master in such devices, as was seen in the series of sketches of characters in masques (whereof Ben Jonson was sometimes the grumbling librettist—he and Jones could never "get on" together) published in a recent issue of the "Architectural Review," which has had, at one time and another, rare good fortune in unearthing such treasures.

HERE AND THERE.

IN reading the new scheme for an Industrial Parliament, or Clearing House for Disputes, or whatever it is to be called, I have been forced to the conclusion that it reeks of Ruskinism. Not that its authors stand convicted as disciples or devotees of John Ruskin. Very possibly they have never consciously read a line of him. That does not greatly affect the issue. Ruskin is all-pervasive. You may avoid his books, but you cannot escape his spirit, which was never more potent than it is to-day. Although he wrote "Unto This Last" well-nigh sixty years ago, it is only to-day that we are beginning to realise the desirability of putting his preaching to the proof. In that book he said that the political economists were all wrong, and of course the political economists retorted that he was all wrong—that he had not mastered the mere rudiments of their "dismal science." That, for all his ignorance, he has beaten them to a frazzle all along the line, is made manifest in a thousand ways, but most especially by this latest attempt towards a humane and sane solution of the labour problem. He is, in reality, the only true begetter of the Builders' Parliament.

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As to the political economists at whom Ruskin ran atilt, their parade of learning and skill, their painstaking ascertainment of hard facts, their dexterous manipulation of statistics, their irrefragably logical deductions from data, could not prevail over his valour of ignorance, because he had happened to hit upon a vital truth which they had all missed or misconceived. What that truth is he states, in his blunt way, in his very first sentence—a portentously long one: "Among the delusions which at different periods have possessed themselves of the minds of large masses of the human race, perhaps the most curious—certainly the last creditable—is the modern *soi-disant* science of political economy, based on the idea that an advantageous code of social action may be determined irrespectively of the influence of social affection." It would seem that these profound doctors in science are detected in a slight oversight. They have left out the mainspring of action.

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They did not exactly overlook it. They saw it lying around, but took so little account of it as to think that the machine would go the better without it. Ruskin puts these words into the economist's mouth: "'The social affections,' says the economist, 'are accidental and disturbing elements in human nature; but avarice and the desire for progress are constant elements. Let us eliminate the inconstants, and considering the human being merely as a covetous machine, examine by what laws of labour, purchase, and sale, the greatest accumulative result in wealth is obtainable. Those laws once determined, it will be for each individual afterwards to introduce as much of the disturbing affectionate element as he chooses, and to determine for himself the result of the new conditions supposed.'" But, alas! these plaguy emotional elements "operate, not mathematically, but chemically, introducing conditions which render all our previous knowledge unavailable." In designing a palace for the new Building Trades Parliament, the architect must not forget a chemical laboratory for the emotions. Any member failing to reveal at least a chemical trace of "social affection" should be sent to the lethal chamber.

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Ruskin did not deny the truth of the economic theory of his day; he simply denied "its applicability to the present phase of the world." It was a beautiful machine, a marvel of mechanism. The only fault that he could find with it was that it would not work. "This inapplicability has been curiously manifested during the embarrassment caused by the late strikes of our workmen. Here occurs one of the simplest cases, in a pertinent and positive form, of the first vital problem which political economy has to deal with (the relation between employer and employed); and at a severe crisis, when lives in multitudes, and wealth in masses, are at stake, the political economists are helpless—practically mute; no demonstrable solution of the difficulty can be given by them, such as may convince or calm the opposing parties. Obstinately the masters take one view of the matter; obstinately the operatives another; and no political science can set them at one."

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In one word, the trouble is—Temper. None of the pleaders "ever seem to remember," as Ruskin says, "that it does not absolutely or always follow that the persons must be antagonistic because their interests are." Yes, but where is the remedy? Science, education, and moral exhortation (including the no inconsiderable dose administered by Ruskin himself) having failed us, all our hope is centred in the Builders' Parliament. If that does not accomplish the impossible, there is nothing for it but to await the Millennium, or the advent of Mr. Wells's comet, which is to bring with it an atmosphere of peace, virtue, and goodwill. Ruskin would have it: "The universal law of the matter is that, assuming any given quantity of energy and sense in master and servant, the greatest material result obtainable by them will be, not through antagonism to each other, but through affection to each other." True, O King! But how shall we apply this truth among a froward and stiffnecked generation that wallows in wilfulness and covets conflict? There are other teachers who will have it that antagonism, not affection, is a law of life—that without struggle there can be no strength—that pulling and pushing keep the stars in their courses and the stones of Westminster Abbey in their beds. Concerning the eternal wrangle between capital and labour, all that can be safely said is that hitherto it has been too bitter to be quite wholesome. It has brought but little health and strength to the contestants, and but little joy to the onlookers.

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If the Parliament of Industry intends to cultivate "the social affections," it will take Imperial Parliament as a model of what to avoid, for there (in times of peace!) rancour reigns, and is counted as a virtue. But Imperial Parliament, we are told, is to be reorganised on revolutionary lines—at all events, the Marquis of Crewe said that the proposals for the reconstitution of the House of Lords "constituted a tremendous revolution." Perhaps ladies are to be admitted; and if we are to have a House of Lords and Ladies, Ruskin's ideal of "social affection" may there and then take effect. If there is to be a House of Lords annexed to the Builders' Parliament, will the Lord Chancellor sit on a slag-wool sack? or on a pile of empty cement sacks? But, speaking rather seriously, one would not for a moment be thought to hold up to ridicule the very excellent idea of bringing masters and men into constant conference on matters that affect not only both these parties, but—what is infinitely more important—the interests of "the largest synthetic industry in the kingdom," and, through that, the interests of the kingdom itself. The scheme is rich in promise, and is no fit subject for profane jesting. Nor do I ridicule Ruskin. One loves him because he was so utterly impossible. But he gave us noble ideals.

DIOGENES.

PRESENTATION OF THE ROYAL GOLD MEDAL.

MR. ERNEST NEWTON, A.R.A., President of the Royal Institute of British Architects, took the chair on Monday, June 25, at a general meeting of the members, held at the rooms of the Institute, 9, Conduit Street, Regent Street, to present the Royal Gold Medal to M. H. P. Nénot.

Preceding the presentation the Hon. Sec. said he had to announce that two further names had to be added to the long list of members who had fallen in the war. Since the last meeting news had been received that Lieut. Roland Walter Lines, a Fellow of the Institute, who was serving with the Canadian Expeditionary Force, and Mr. W. A. Rigg, Associate, had been killed. The President said he regretted that M. Nénot was unable to be present owing to indisposition, but the French Ambassador had deputed the Secretary of the Embassy, M. Adrien Thierry, to receive the medal on M. Nénot's behalf. Proceeding, Mr. Newton said it was customary on these occasions to give an outline of the career of the recipient of the medal, and, although most of them knew M. Nénot's history, there might be some to whom his interesting and strenuous career was not so familiar. It was not often that a taste for the austere and difficult art of architecture manifested itself at a very early age, but they found M. Nénot, when only nine years old, already showing a marked predilection, not, as they might expect, for its external and more naturally attractive aspects, but by making a detailed and accurate plan of the "pension" at Villiers-le-Bel. Fortunately this tendency was encouraged by those responsible for his education, and he was placed at the age of thirteen in the atelier of M. Lequeux. Surely the youngest architect pupil on record!

At fifteen, Nénot entered the Ecole des Beaux-Arts. His studies were abruptly interrupted in 1870, when, immediately on the outbreak of war, he enlisted, fought valiantly, and received as his first decoration the Military Medal. After the war he served his term in the artillery, and so great was his patriotism that it required all the persuasion of his former masters to prevent him from re-engaging in the Army and to bring him back into the paths of architecture and a resumption of his studies at the Ecole des Beaux-Arts. Here he continued his work until 1877, when, at the age of twenty-four, he gained the Grand Prix de Rome. During these years M. Nénot worked in the atelier of M. de Questel and in the office of Charles Garnier, competed in collaboration with M. Oudiné for some important buildings in Belgium, won the competition, and was entrusted with the execution of the work. Many of them would think that after these strenuous years of study, crowned by the Grand Prix, M. Nénot might have considered himself fully equipped and entitled to settle down to the practice of architecture, but he wisely looked on all those years of work as preliminary, and, being persuaded that it was only by a profound study of the ancient masterpieces of architecture that a complete mastery of his art was to be gained, he visited in turn the principal towns of Italy and Greece, as well as Constantinople and Jerusalem, and finished his tour of study by a visit to Egypt.

During the last year he spent at the Villa Medici M. Nénot competed amongst 240 architects for the National Monument at Rome to King Victor Emmanuel, being impelled to compete by the laughing taunt of a very young architect that Italian architects were certainly superior to all foreigners! The prize of 50,000 francs was awarded to him, but the execution of the work was entrusted to an Italian. M. Nénot then undertook a tour of study in France and a critical and careful examination of buildings designed for every purpose, and with all these years of careful preparation behind him and equipped with this well digested knowledge he entered for the great competition for the rebuilding of the Sorbonne, won it, and, after some hesitation on account of his age, he being then only twenty-nine, the execution of the work was placed in his hands, but was not actually begun until after he had visited the Universities of Germany, Austria, Belgium, and Holland. He (the President) would not attempt to describe this great work, which took seventeen years to complete, it was well known to all visitors to Paris, and was the subject of a fine monograph by M. Nénot, a copy of which was in their library. M. Nénot had carried out numerous other works of importance, but it was with the Sorbonne that his name would always be especially associated. Mr. Newton knew, he said, that it was expected that the President when he presented the Gold Medal should efface himself as soon as he had delivered a brief introductory address, but he could not at a time like this hand to a distinguished Frenchman the token of their respect and admiration without telling him, and through him his compatriots, something of what his great country was to us. It was tradition that English people did not understand the French, and they might be almost grateful to the war for having revealed France to many who did not know her well. To architects the history and masterpieces of French architecture were of absorbing interest. Its unique Gothic architecture—the picturesque transition from Gothic to the mature and ordered Renaissance—modern work, all in turn, claimed the admiration and showed them achievements not only of the highest intellectual attainment, but containing always that something more than talent, that touch of personal and national genius so particularly characteristic of French architecture. France could boast of a long succession of highly distinguished architects, who had gained their reputation by a profound study and complete mastery of the principles and technique of their art. All this splendid work could only have been done by a fine people. The very name France conjured up visions of a nation with as many facets as a diamond. Every period of its history was brilliant, but the France of to-day was perhaps the most impressive of all. Devoted to peace, although nursing a dignified determination to efface the memory of 1870, when the time came to put that determination into action there was at once manifest in every class and degree a quiet serene determination to suffer everything, to endure everything, and finally to conquer.

Never in the whole history of the world had such battles been fought as during this war. Never had more heroic deeds been performed, and yet, amidst all these gigantic happenings, the steadfast and unbreakable resistance at Verdun stood out in lurid relief and would be told so long as the world endured. It was impossible to believe that their two nations, having fought shoulder to shoulder throughout these long, terrible years, could ever again break a bond cemented by the blood of their sons. For all time we should be united by the tie of a friendship based on mutual understanding, affection, and respect. This alliance should be proof against the insidious propaganda of that nation which had, to its eternal shame, brought to such perfection the truly devilish art of lying, false witness, and sowing discord. (Cheers.) He could only regret that it was not his pleasant duty to decorate, as well as M. Nénot, a distinguished architect representative of the other Allies. They had already on the list of Royal Gold Medallists the names of famous Italian and American architects, and they might hope, when peace again allowed them to pursue their art unhindered, to add to that list of names of architects of those other allied nations who were not yet represented on their roll. He then handed a replica of the medal to M. Thierry, who received it on behalf of M. Nénot. In reading, in happier—or at all events more peaceful—times, the annals of the Institute, it will probably be noted with interest that during the war the Royal Gold Medal was not cast in that precious metal, but was represented temporarily by a token.

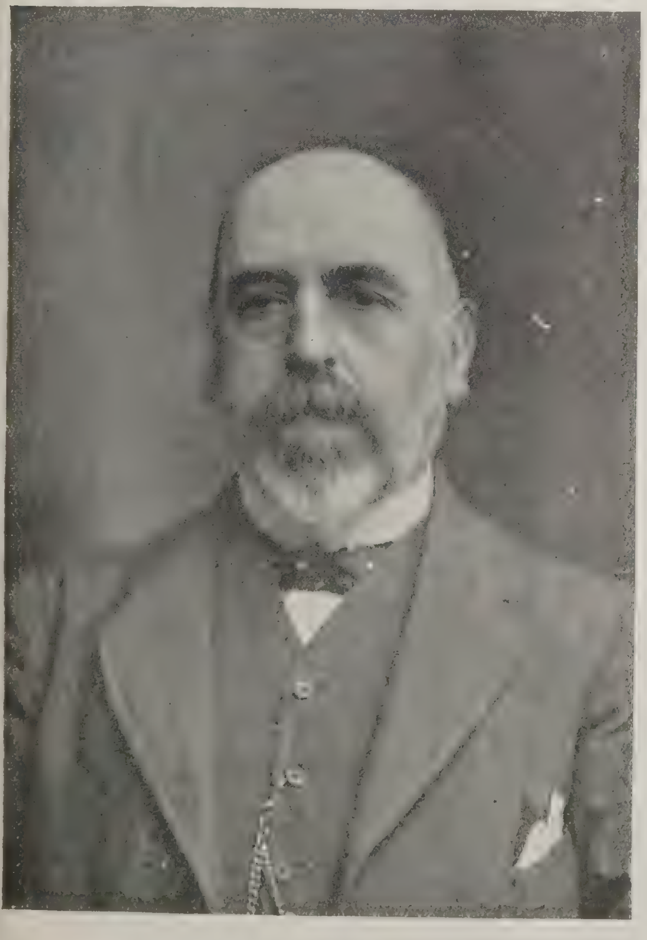
In a brief speech, delivered in French, M. Thierry expressed the pleasure it gave him to receive that honour on behalf of one of his distinguished countrymen. Referring to the remarks of the President, he said he fully shared his sentiments regarding the happy alliance which existed between the two countries, and he had no doubt as to its lasting character.

On the motion of Mr .Walter Cave, seconded by Mr. Guy Dawber, a vote of thanks was accorded to M. Cambon, the French Ambassador, for deputing M. Thierry to attend the presentation.

Mr. Reginald Blomfield, R.A.. then unveiled an oil colour portrait of the President, the work of Mr. Arthur Hacker, R.A., for presentation to the Institute. He eulogised Mr. Ernest Newton's services to the Institute during the three years he had been in the Presidential chair, and expressed the hope that they would long continue to see him among them.

Mr. Paul Waterhouse also referred to the valuable work which the President had rendered the Institute during the past three very trying and difficult years.

The President, in formally accepting the portrait on behalf of the Institute, said he was conscious of many shortcomings, not only in carrying out his duties there, but in carrying out some of the other duties which had fallen to his lot, but he had done his best. He had not spared himself on their behalf, and if he had come up to their expectations that was quite sufficient reward.



THE LATE MR. WALTER LEWIS SPIERS.

THE PLATES.

Alterations and Additions to Leicester Royal Infirmary.

A DESCRIPTION of the interesting alterations and additions which have been made to the children's hospital at Leicester Royal Infirmary, from the designs of Messrs. Everard, Son, and Pick, is given in an article on page 9.

The Rotunda, Cheltenham.

The Rotunda, Cheltenham, of which some drawings by Mr. Gordon Hemm are published on two of the plates in this issue, was erected between the years 1824 and 1832, from the designs of John Papworth, an architect and designer who had a large share in the initiation and development of the Classic Revival in the early part of last century. Papworth as a boy displayed a keen interest in architecture, and, on the advice of Sir William Chambers, he was apprenticed to Thomas Wapshott, with whom he acquired an intimate practical knowledge of the details of design and construction. In addition to the Rotunda at Cheltenham, he designed a large number of buildings in London and many country residences. One of his minor achievements was the opening up of the view of St. Bride's Church from Fleet Street. He died in 1847.

THE LATE WALTER LEWIS SPIERS.

MR. WALTER L. SPIERS, whose death, as we announced immediately afterwards, took place at Sir John Soane's Museum on May 28, and of whom we now present a portrait, was born at Oxford in July, 1848. On his election to a Choristership at Magdalen College he entered Magdalen College School, and continued his education in the engineering department at King's College, London, in 1864.

He was articled to his brother, Mr. R. Phené Spiers, in 1866, in which year he joined the Architectural Association. During his studentship there he obtained First Prize in the Class of Design and Sir William Tite's Prize for a design for a town church. He also served the offices of President of the Class of Design and Vice-President of the Association, and was for some years librarian. He became a student of the Royal Academy in 1868, and from 1870 to 1880 was in the office of Mr. Thomas Henry Wyatt, and of his son, Mr. Matthew Wyatt, with whom he afterwards went into partnership.

In connection with the Royal Institute of British Architects Mr. Spiers passed the Voluntary Examination in Architecture in 1870, obtained a silver medal for measured drawing of Eastbury Manor House in 1873, and in 1875 was elected an Associate. In 1887 he was appointed District Surveyor for Charlton, Lee, and Kidbrooke, under the Metropolitan Board of Works, and held this post also under the London County Council till his appointment as Curator of Sir John Soane's Museum, in succession to the late Mr. G. H. Birch, F.S.A., in 1904.

Mr. Spiers had been for many years an enthusiastic student of London topography, and did very useful work as a member of the London Topographical Society, of which he was for some time a member of Council. He was elected a Fellow of the Society of Antiquaries in January, 1916.

Mr. Spiers was also an enthusiastic Volunteer, and was for many years a member of the Artists' Corps, in which he rose to be captain of his company, and for four years held the post of musketry instructor, retiring with the honorary rank of major.

A devoted Churchman, with a considerable knowledge of Church music, he was connected for many years with St. Andrew's Church, Wells Street, and for the last two years acted as honorary church treasurer.

NEWS ITEMS.

Infirmary as Memorial.

Major G. H. Peake, of Bawtry Hall, Yorkshire, has offered to give the sum of £10,000 towards the cost of building a new infirmary for Doncaster as a memorial to his eldest son, Lieutenant Raymond Peake, Coldstream Guards, who was killed in action in France. The Hospital Committee have accepted the offer.

Housing the Working Classes.

In the House of Commons on June 20, Mr. Hayes Fisher, Parliamentary Secretary to the Local Government Board, replying to Mr. Wing, said that the question of the housing of the working classes after the war was engaging the careful attention of the Local Government Board. A Committee, of which he was chairman, would shortly issue elaborate questions to the various local authorities.

Newcastle Infirmary Extension.

Newcastle City Council have sealed a petition to Parliament to bring in a Bill to carry into effect the arrangement for the transfer to the Newcastle Royal Victoria Infirmary, for the proposed extension of the infirmary, of 14¾ acres of land forming part of the Castle Leazes. It was stated that the Bill was being promoted by the Corporation and the Infirmary, and that the Stewards of the Freemen were not a party now to the promotion of the Bill.

Huddersfield Technical College.

At a meeting of Huddersfield Town Council it was announced that Colonel Beadon, agent for the Ramsden estate, had written stating that Sir John Ramsden would have much pleasure in giving £3,000 to the Technical College Extensions Fund, of which £2,000 should be devoted to the Coal-tar Colour Chemistry Department and £1,000 to the Engineering Department. The offer was accepted with many thanks.

Dublin Housing.

The Lord Mayor of Dublin believes that the loan for the carrying out of two of the Corporation housing projects is now practically in the hands of the city authorities. This will mean the commencement of building work on the Spitalfields and Fairbrothers and other sites. This development will give a needed stimulus to employment in the city, and will hasten an important contribution to the Dublin housing problem.

Conference of Irish Quarry Owners.

At a meeting of the Joint Committee representing the Royal Institute of Architects of Ireland and the Dublin Industrial Development Association, held at 9, Dawson Street, Dublin, Major Crean, President, D.I.D.A., in the chair, arrangements were made for holding a conference of Irish quarry owners to consider how the use of Irish stone may be furthered generally, but particularly in the rebuilding of Sackville Street and the destroyed area of the city.

Town Planning Scheme for Leicester.

The Leicester Corporation is among the first of the large boroughs and cities in the country to get into shape a town-planning scheme. It is stated it will be a comprehensive one, and that the details are well forward, though it will not be put into operation till the war is over. By the scheme the surrounding country districts will be affected to some extent, and a series of consultations between the authorities concerned and the borough authorities are being arranged, in the hope that, by consent, an understanding will be arrived at.

Cracks in the Tower of London.

"The observations on the rate of growth of cracks in the buildings of the Tower of London," says the report of the National Physical Laboratory, presented at the annual meeting, "have been continued. No serious disturbances have been detected, but careful examination of the roadway on the quay wall facing the river has revealed that movements of the wall, not amounting to more than a few hundredths of an inch, have taken place, presumably of the nature of a slide towards the river."

Builders' Merchants' Alliance.

At the annual meeting of the Builders' Merchants' Alliance, held on June 19, at Basinghall Street, London, E.C., a report and balance-sheet were submitted. The latter shows a small deficit, because several firms have discontinued membership for the period of the war owing to their businesses being closed. The Trade Protection Department has issued 1,743 applications for debt, and has been successful, or partly so, in more than half the cases. The President unveiled a Roll of Honour to the members of the B.M.A. engaged in the war.

Proposed New Wing for Hymers College, Hull.

The Governors of Hymers College, Hull, have decided to make an appeal to the citizens of Hull for funds to enable them to build a new wing. It is intended to provide accommodation which will enable the school to take at least 450 boys, but which will also make it possible to develop higher courses of work, particularly in modern subjects, among the senior boys. The Right Hon. T. R. Ferens, M.P., has promised £5,000 towards the building fund of £10,000 now required.

A Scottish Building Scheme.

At Clydebank Dean of Guild Court linings have been granted to the Dalmuir and West of Scotland Estates Company for the erection of twenty-nine tenements of houses on the south side of Dumbarton Road, Dalmuir. The scheme provides for about 200 houses, mostly of the three-apartment type, and the site is where Messrs. Collins's Dalmuir Paper and Printing Works stood. The building of these tenements will mark the completion of the building line on the south side of Dumbarton Road at Dalmuir from the Forth and Clyde Canal Bridge to the Dalmuir West car terminus.

Building Trade Wages in Birmingham.

An application was made recently by the operatives in the building trade of Birmingham for an increase of wages to the extent of 3d. per hour above the existing war bonus. The employers, however, did not feel justified in acceding to the request, and the matter was thereupon referred to the Board of Trade. A telegram has now been received from the Industrial Commissioners to the effect that they approve of the application being submitted to arbitration, and stating that the employers will be represented. The operatives will be represented by Councillor Saunders and others. No date has been fixed for the arbitration proceedings, and the name of the arbitrator has not yet been announced.

South of Ireland Stone Quarries.

The Cork Industrial Development Association request southern quarry owners, especially those having grit stone for disposal, to send to the association their names and addresses, the class of stone and the quantity available, the description of the machinery on the workings, the proximity of the quarries to deep water, and the conditions on which they would be prepared to allow their quarries to be worked (on a lease or a royalty basis). The information will be treated in strict confidence, and will be employed by the association to utilise some of the country's natural resources, and in the interest of the present holders of such properties.

Industries Fair for Glasgow.

Glasgow Corporation is to support another British Industries Fair to be held in the city early in 1918, and as adequate hall accommodation is still a dream of the future, the Special Committee on British Manufactures recommend the erection of a suitable temporary building on ground in Victoria Road belonging to the Common Good, which could also be used for other exhibitions, shows, and large public meetings pending the completion of a permanent hall. The cost of a sufficiently commodious structure is estimated at £10,000. It is understood that next year's fair, unlike that held at Govan a few months ago, will be specially representative of local industries.

North Staffordshire Building Trade Dispute.

A joint conference of the North Staffordshire Master Builders' Association and of the North Staffordshire Building Trades Federation has been held to endeavour to arrive at a settlement of the recent wages dispute. The employers have offered a war bonus of 1d. an hour, but this the representatives of the federation, on behalf of the operatives, have refused, the demand being for 2d. an hour. The position has been communicated to Sir George Askwith, at whose urgent request the conference was held in order that a strike might be avoided, and it is now expected that the whole dispute will be referred to arbitration.

The Message of the Artists.

Many of the leading British artists have combined to show, in a series of lithographic prints, the aims of Britain and her Allies in the War, and also some typical and impressive aspects of the British effort against the enemy. The British aims are shown in a series of allegories, printed in colour. "The Freedom of the Seas" is rendered by Mr. Frank Brangwyn, "The Restoration of Belgium" by Mr. Clausen. Other subjects are undertaken by Messrs. Dulac, Greiffenhagen, Augustus John, Ernest Jackson, Gerald Moira, William Nicholson, Charles Ricketts, Will Rothenstein, Charles Shannon, and Edmund J. Sullivan. The British effort is typified in several series such as "Making Soldiers," by Eric Kennington; "Making Ships," by Mr. Muirhead Bone; and other series by Messrs. Frank Brangwyn, Clausen, Nevinson, Hartrick, Charles Pears, Will Rothenstein, and Claude Shepperson. The works will be exhibited in the first instance in the galleries of the Fine Art Society, New Bond Street, London, for a period dating from July 6, and afterwards in galleries throughout the country. Arrangements will also be made for their display in allied and neutral countries.

WAR·BVILDINGS·SECTION

JAPANESE HOSPITALS FOR DISABLED SOLDIERS.

MEN permanently invalided by war (says a writer in the "Japan Magazine," whose rather quaint English it would be an impertinence to alter) form a problem that nations should intelligently and altruistically solve. The present war has made the question one not for any one nation but for the whole world.

Japan's Hotel des Invalides, though established after the model of Western institutions, is believed to have some points of superiority in respect to treatment and provision for the needs of disabled soldiers. For this reason it has many foreign visitors from time to time, the last being a number of officials from Russia, who were anxious to see how Japan dealt with the problem of disabled heroes.

The Haihei-in, as the Japanese call it, is situated at the village of Sugamo, in the northern suburbs of Tokyo, about five minutes from Otsuka station or Sugamo tram-stop. It is under Government auspices, and the control of the Minister of War, the care of it being connected with the First Army Division. It is managed by two officers, five non-commissioned officers, and one army surgeon. The present head of the establishment is Major Shuichi Miyamoto.

The institution was established in 1906, just after the Russo-Japanese war, which, being the greatest Japan ever fought, left a great many disabled soldiers for whom the State felt responsible. To the families of those who fell on the field of battle special gifts of money were made in addition to annual pensions. Those maimed by the war and yet in good health were expected to equip themselves to earn a living, and in this work the home for disabled soldiers was expected to assist. Baron Hachiroemon Mitsui offered a site for the institution, and the Imperial Diet gave consent for the erection of the building.

Most of the inmates of the Home for Disabled Soldiers are those who have lost a leg or an arm, or were rendered unfit for common work in some such way. They are provided with food and shelter and assisted according to their needs. They have to take proper recreation; and have a library, reading-room, and the usual comforts of civilised life. At times they are afforded musical or other entertainments; and they are quite free to move about and enjoy themselves as best they can. The food given them is much better than that provided for the unwounded soldier—in fact, three times more expensive than that provided in barracks, and about twice as expensive as that provided for non-commissioned officers. Nurses are in attendance on those still helpless from wounds or war work. Those in the Home do not receive any pension apart from the provision made for them in the establishment, except a little pocket-money from the sums allotted them as special rewards after the war, one-third of their war pensions going to their families.

While thus provided for and made comfortable, the inmates of the Soldiers' Home are free to earn anything they can on their own account. Some go to school every day; some go to the arsenal and work at making war weapons; others act as clerks, while others knit, or make toys. A few aspire to become artists, some of whom have made remarkable progress in that direction under an able teacher, Mr. Suiun Komuro, who keeps an art school. There are also a few who have taken up foreign languages and made good progress, especially in English and French, graduating from Waseda University.

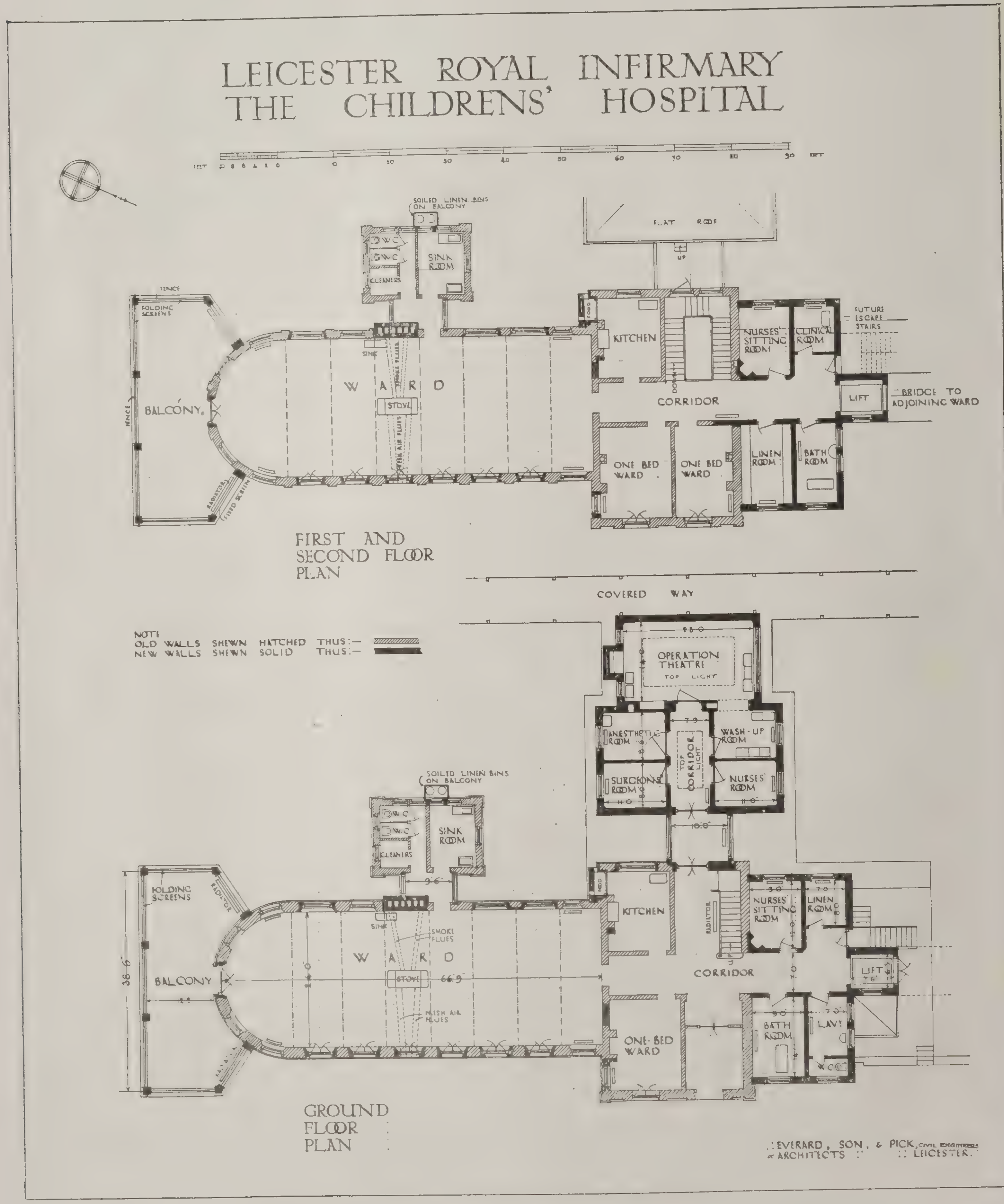
The recreation department of the institution has billiard tables and other forms of amusement; and philanthropists provide the reading-room with newspapers and magazines. There are hand ambulances to convey those who cannot walk to any part of the institution they wish to reach. The men take a great interest in the European war, and eagerly read every scrap of news pertaining to it. The usual dress is the accustomed military uniform, but some are so disabled that they have to wear the common kimono, as it is more convenient. The common soldier's native dress is made of cotton, while the dress of officers is of silk. The crest of the inmates of the Home for Disabled Soldiers is a cherry blossom within a circle, and this crest is on the *haori* worn by the men. Their rooms are in Japanese style, and they keep them scrupulously neat, the privates having a six-mat room and the officers being honoured with an eight-mat room. Each room has its customary *tokonoma*, with the usual ornaments and decorations, besides a writing table and utensils. Some rooms have pet birds in cages, or some other pet desired by the occupant, many preferring simply a few pot-plants.

The number of patients now in the Home is less than 200, which is its full complement. The last war left Japan with about 15,000 disabled soldiers, but all could not be accommodated at the Home. In any case, most of the disabled soldiers dislike to be taken away from their friends to live in such an institution, their friends preferring to have them at home. Consequently most of the patients were men who had no family ties or friends.

The site of the Soldiers' Home was formerly the estate of Viscount Shishido, an old daimyo, and the garden is a very beautiful example of Japanese landscape style. This, of course, the soldiers enjoy immensely. The place was purchased by Baron Mitsui especially on account of the garden, which has pretty hills, a lake and many trees, a perfect picture of Nature, and therefore soothing to the worn-out nerves of battle heroes. The inmates have in every way the same comforts and pleasures that they would have at home, except the absence of their relations. They may go out all day, as they like; and even make a visit to friends in the provinces; and there is no difficulty in getting leave of absence for a night or two. Only officers of the most humane temperament are placed over the institution, and there are few rules or restrictions to annoy the men. Chivalry and loyalty comprise the spirit of the place. Men of high class are asked from time to time to deliver lectures and addresses before the disabled soldiers. An image of the late General Count Nogi is enshrined at the institution, so that the men may always have the inspiration of his noble spirit; and on September 13 annually a fête is held in his honour and memory. While living, the General devoted all the monetary gifts he received for writing epitaphs to the Home for Disabled Soldiers, and took a warm interest in the life of the men there. After his tragic death the men made a special request that a shrine to his spirit be erected in the Home, where they might commune with him as they wished. It stands in a special room set apart for that purpose.

In the midst of the garden stands a fine bronze statue of a crane. This is specially prized, being a gift from the late Emperor.

Japan's experience in the war with Russia taught her that the wounded are always about ten times more in number than the killed. In the great battle of Nashan, the Third Division, which had the fewest losses, had 150 killed and 1,209 wounded, while the Fourth Division, which suffered most loss, had 299 killed and 1,273 wounded. Taking all divisions into consideration, the greatest losses were suffered in the battle of Tokuriji, and as the casualties mounted in number from day to day the end of the war found Japan with a very great number of disabled men. In



THE CHILDREN'S HOSPITAL, LEICESTER ROYAL INFIRMARY. EVERARD, SON AND PICK. ARCHITECTS.

the much larger armies of the present war in Europe the killed and maimed must be incomparably greater. How to provide for the disabled will form an unprecedented problem for the belligerent countries. No doubt (says the "Japan Magazine") they can obtain some useful suggestions by studying the Imperial Ordinance of April, 1906, No. 214, promulgated on August 4 of the same year by the Japanese Government; as well as Notification No. 8 of the War Department, issued on August 6, 1906, and something further might be learned by paying a visit to the Home for Disabled Soldiers at Sugamo.

ALTERATIONS AND ADDITIONS TO THE CHILDREN'S HOSPITAL, LEICESTER ROYAL INFIRMARY.

Certain developments in the design and planning of buildings, though perhaps only indirectly related to the war, may be quite legitimately included in this section, which although primarily intended to represent buildings of definite war interest, is wide enough in scope to embrace all the improved methods and innovations that are identified with the newer and larger outlook which the war seems to have inspired. Out of evil cometh good; and war has invariably the one good effect at least of advancing medical, surgical, and sanitary knowledge, science and skill. Consequently, modern hospital design and construction may be said to be largely based on the experience gained in modern warfare, and, in its chief points, to date no further back than the Crimean war, when ideas on the subject were completely revolutionised; and the present war has still further advanced the science of hospital construction. Our point is illustrated by the modernising of the Children's Hospital at Leicester Royal Infirmary, where some most interesting additions and alterations have been made to the original building from the designs of Messrs. Everard, Son, and Pick.

Accommodation is provided for sixty-six children. There are three floors, all somewhat similar in plan, except the ground floor, which has the addition of an operation block. The photograph reproduced on this page shows the means adopted for obtaining ample light and air in the existing wards, the old sash windows being converted into casements extending the full height of the room.

A feature of the southern end of the block (shown on three of the plates in this issue) is a three-storey sun balcony, the plan of which was somewhat affected by the semi-circular end of the existing wards, from which the balcony gives access. The verticals and floors are of reinforced-concrete construction, the floors, in common with those of the ward, having a covering of terrazzo.

An area equal to about three-fourths of the glazed sides to the balcony is made to open, thus giving the effect of an "open-air" ward and possessing at the same time the advantage of being easily closed during inclement weather. Provision for warmth during the winter months is made by two radiators on each floor.

The general contractors were Messrs. J. Chapman and Sons, of Leicester; the reinforced concrete construction was by Messrs. W. Moss and Sons, Loughborough.

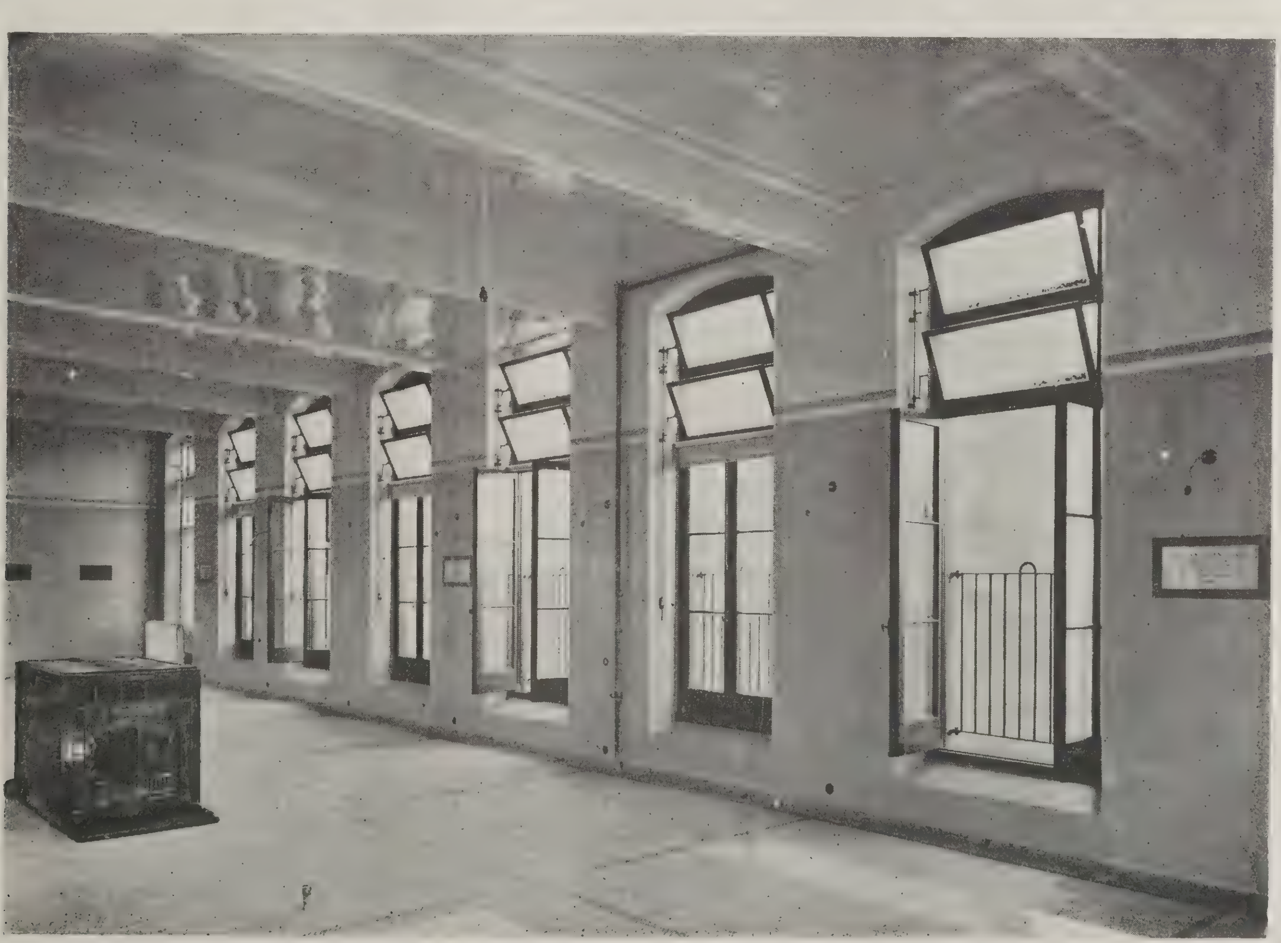
TRADE AND CRAFT.

Asbestos Cement Slates, Corrugated and Flat Sheets.

With respect to the manufacture of asbestos cement slates and sheets for roofing and for general building purposes, Messrs. British Fibro-cement Works, of Erith, and 22, Laurence Pountney Lane, London, E.C., have issued a timely reminder that the advantages of these materials were appreciated on the Continent several years ago. This firm claim that, always perceiving the merits of asbestos cement products, particularly in corrugated sheets, they conducted a series of difficult and exhaustive experiments which ultimately enabled them to perfect the plant and machinery for manufacturing corrugated asbestos sheets in England, with British capital, by British labour, and on entirely British material.

Devoting their factory exclusively to the manufacture of asbestos cement sheets and slates, they claim that their product is of unsurpassed quality. In every department of their works, there is the most careful attention not only to the details of manufacture, but also to the drying and maturing of the slates and sheets; while perfected business organisation ensures adequate attention to methods of loading and despatch. Hence the high reputation the firm have already established.

The advantages of asbestos cement roofing are, indeed, already familiar to architects and builders. The material is inexpensive, durable, and of light weight —this last-named attribute admitting of great economy in the use of timber or steel trusses and framework. Moreover,



THE CHILDREN'S HOSPITAL, LEICESTER ROYAL INFIRMARY: NEW WINDOWS TO EXISTING WARDS.

EVERARD, SON AND PICK, ARCHITECTS.

the material is in the highest degree fire-resisting, and is the best of all non-conducting substances. When once the materials have been fixed in position the job is finished, no after-treatment being necessary—that is to sav, the surface needs no coating with paint or any other preparation. Asbestos-cement is its own preservative, and, growing actually stronger with age, it is practically everlasting. It is worth while to mention that curved sheets can be formed to any required radius—a rather important consideration with respect, for example, to hospital and sanatorium construction, in which sharp angles, which would harbour dirt and disease-germs, are forbidden.

Asbestos slates and flat and corrugated sheets have been supplied very extensively by the British Fibro-cement Works for factory roofing and constructional work generally, and their products have been largely adopted for munition factories and other Government works, for shipyard buildings, and for farms, estate and railway buildings. The firm lay stress on the fact that they manufacture nothing else but asbestos tiles and sheets, plain and corrugated. These materials, being light to handle, and easy to transport and to fix, should play a most important part in the building boom that will follow hard upon the conclusion of peace.

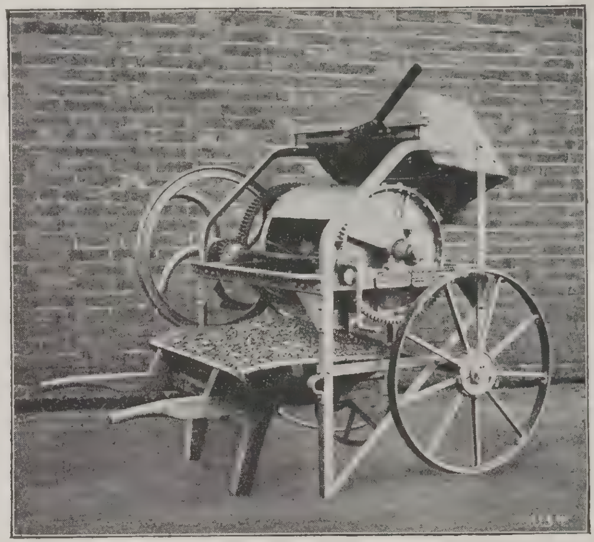


FIG. 2.—RANSOME HAND MIXER ON WHEELS.

Ransome Concrete Mixers.

Concrete mixing by machinery is not merely much more rapid than hand-mixing, but is very much more certain to produce satisfactory results—more regularity and thoroughness in the mixture. Consequently, it is recommended in most text-books and in nearly all specifications that concrete shall be machine-mixed.

The Ransome concrete mixers, owing to their extensive use by the British, colonial, and foreign Governments and Government engineers and contractors, are known the world over as soundly constructed, rapid, and economical machines. These machines, which are made by Messrs. the Ransome-verMehr Machinery Company, Ltd., are entirely of British design, workmanship, and material throughout, being manufactured at Ipswich. In all mechanical details they show extremely sound construction, which renders maintenance cost low and general working satisfactory.

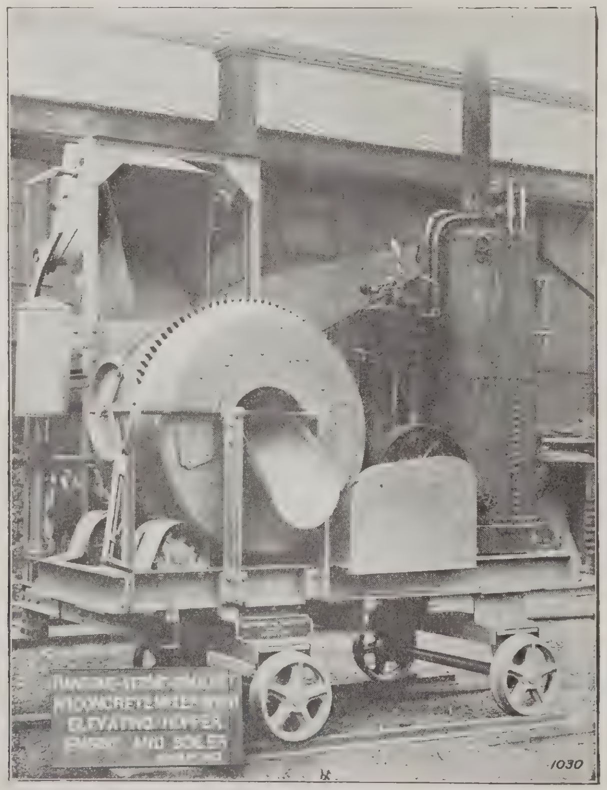
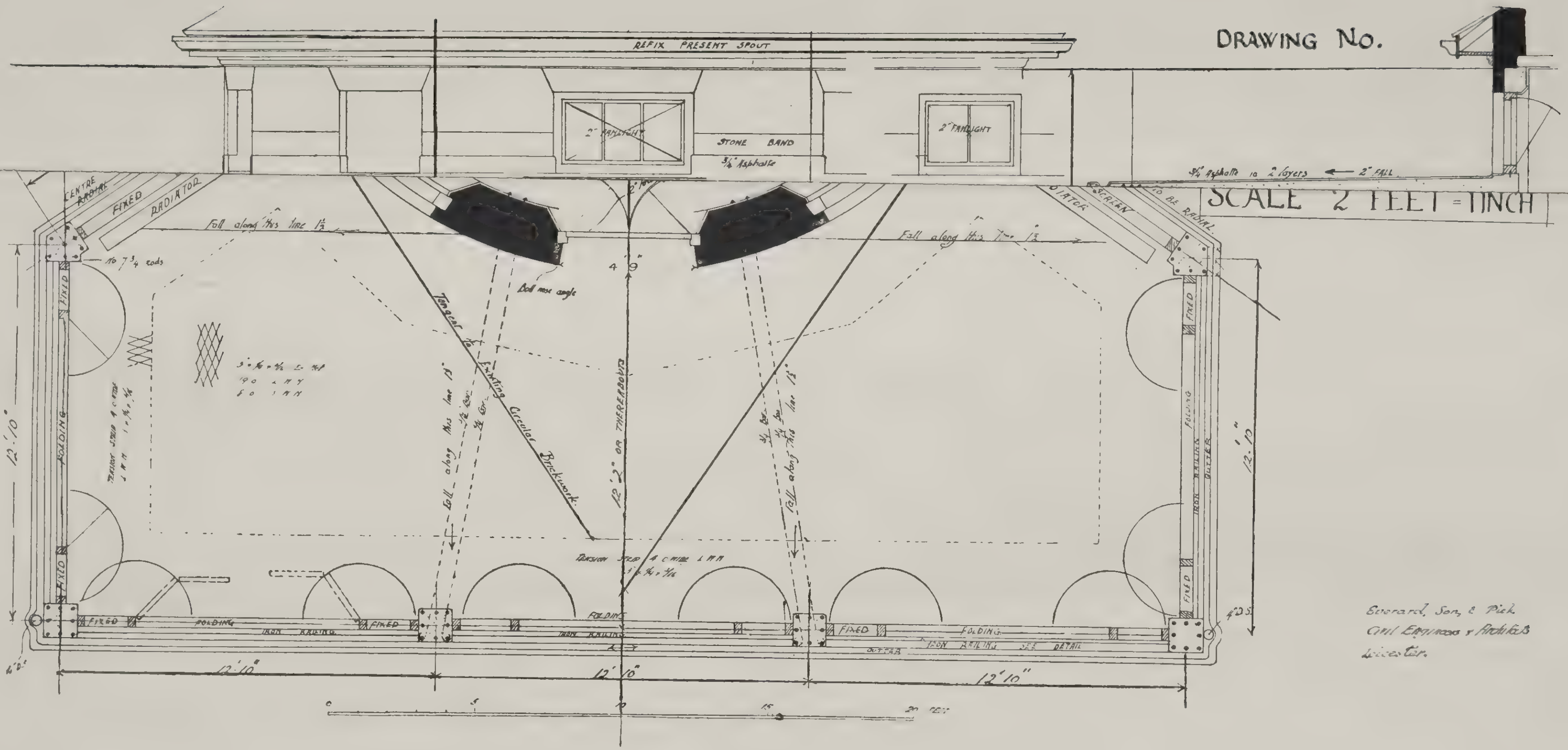


FIG. 1.—STANDARD RANSOME MIXER.

The mixers are supplied in seven standard sizes, having batch capacities of 2 cubic ft., ¼ yard, ½ yard, ¾ yard, 1 yard, 1½ yards and 2 yards respectively.

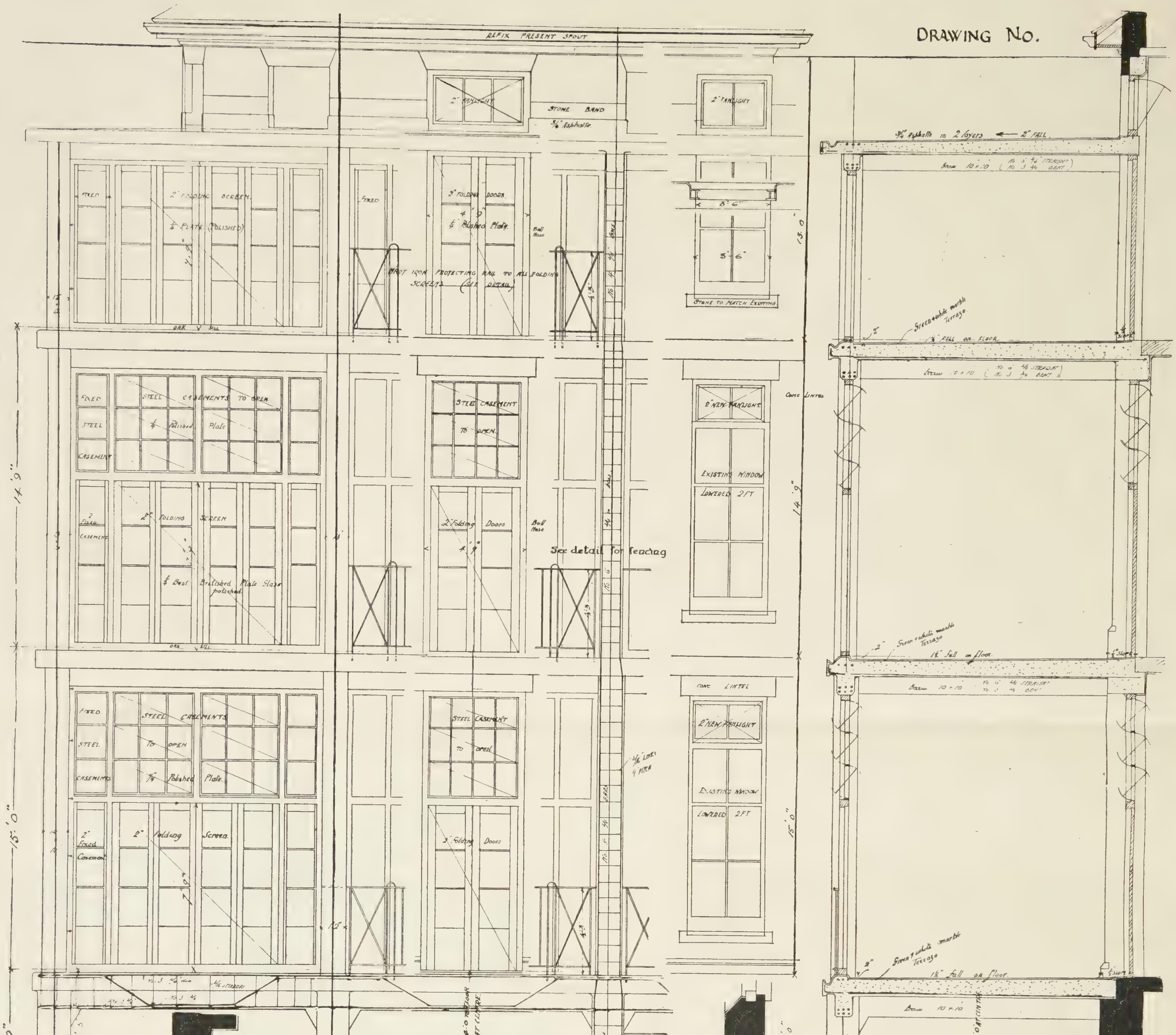
Fig. 1 shows a standard Ransome mixer with direct-coupled steam power. It has an elevating hopper, and is mounted on gauge wheels. Any size of machine can be supplied, with either steam, petrol, paraffin or electric direct-couple drive. Various special arrangements of the machine have been supplied to meet particular conditions, and these mixers are extensively used for street paving work. Machines are specially arranged for this class of work so that the aggregate and mixed material can be satisfactorily handled in the limited space usually available on street contracts. We understand that the company are pleased at all times to submit full details of standard machines and of special equipments for special requirements.

The Ransome hand mixer has, since its introduction, undergone considerable improvement and development. This machine has shown itself of great economic value in mixing small quantities in scattered areas and, as will be seen from Fig. 2, the mixer is mounted on substantial wrought-iron wheels, which render it readily portable from point to point, whilst the mixing drum is so arranged that the mixed aggregate is discharged direct into standard navvy barrows; whilst, of course, for trench work, the mixer itself can be placed immediately above the trench and discharge the aggregate directly into it. Each machine is provided with a small measuring hopper, in which the aggregate is measured and apportioned, and can be fitted with automatic water tank and connections. These hand mixers, by reason of their special arrangement of mixing, are also serviceable for mixing tar macadam, asphalt paving, etc., and have been successfully supplied with steam-jacketed mixing drums where high temperatures have been necessary. The complete outfit does not weigh more than 1,100 lb., whilst the batch capacity is 2 cubic ft. of material.



ARCHITECTS' WORKING DRAWINGS (SERIES II.). XLII.—LEICESTER ROYAL INFIRMARY: NEW SUN BALCONY TO CHILDREN'S HOSPITAL.

EVERARD, SON AND PICK, ARCHITECTS.



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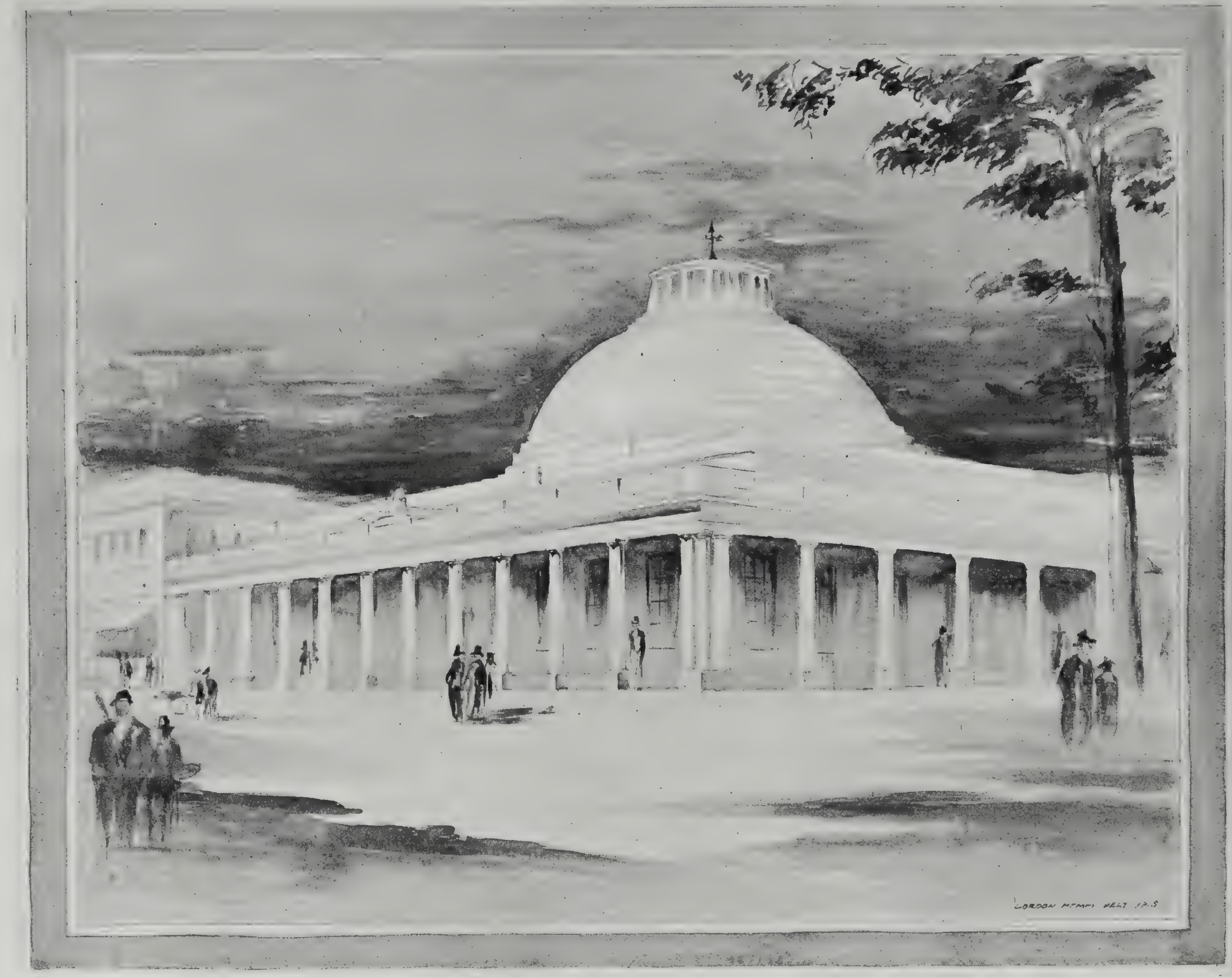
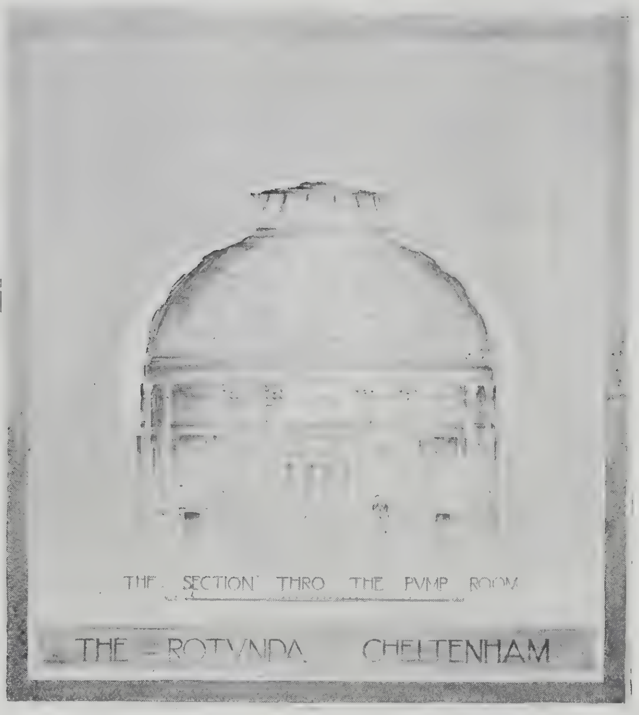
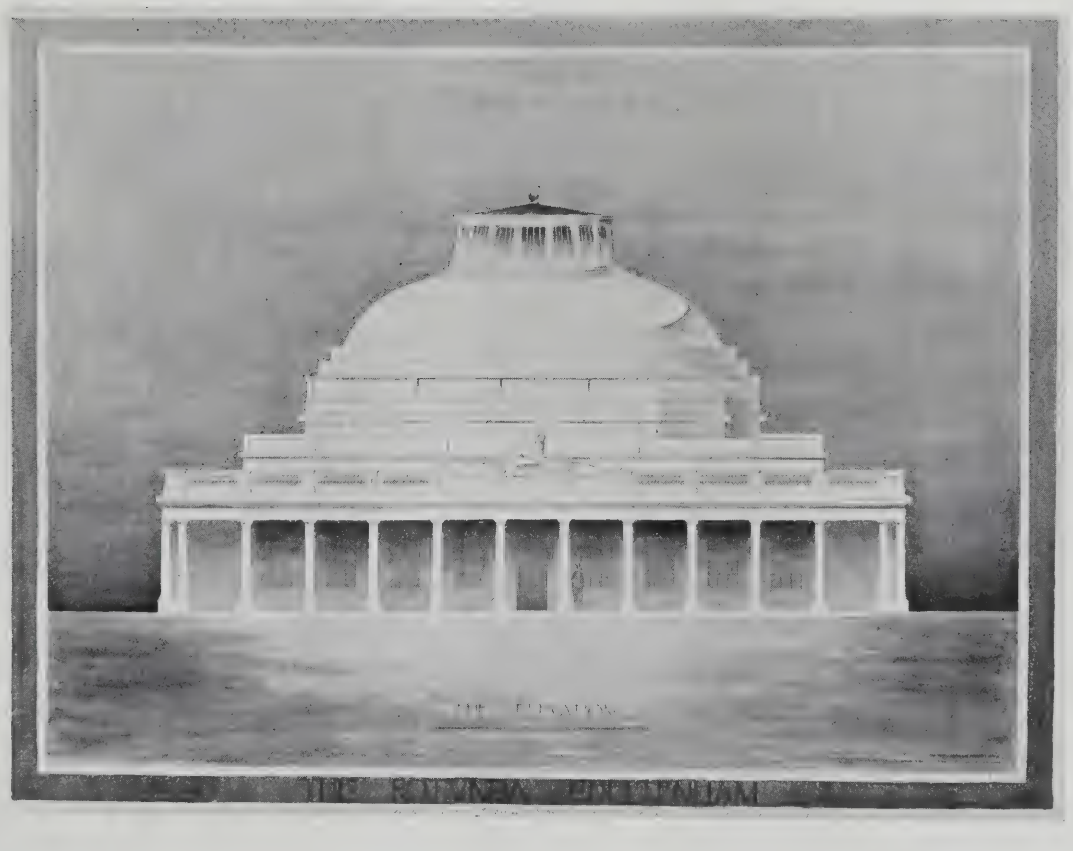


STUDENTS' DRAWINGS (SERIES II.). XLVIII.– THE ROTUNDA, CHELTENHAM.

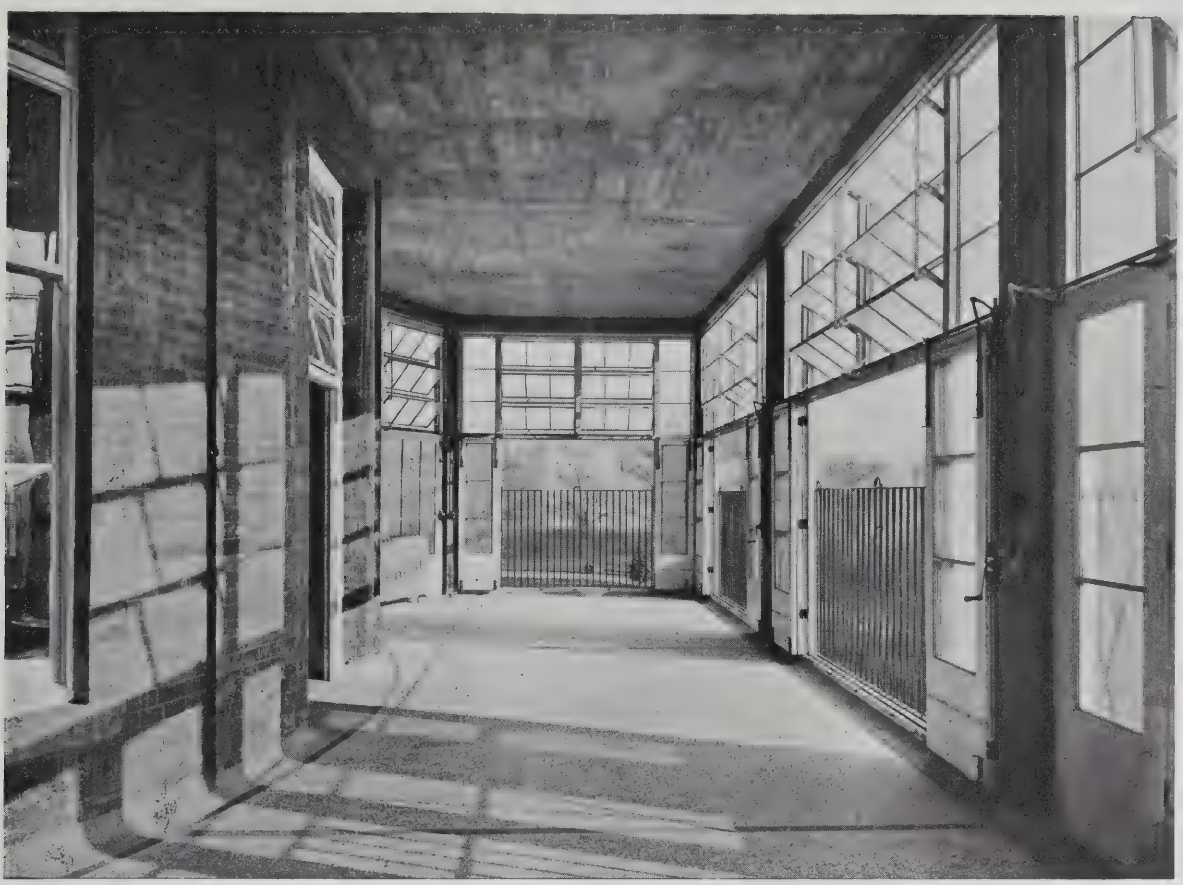
BY GORDON HEMM.



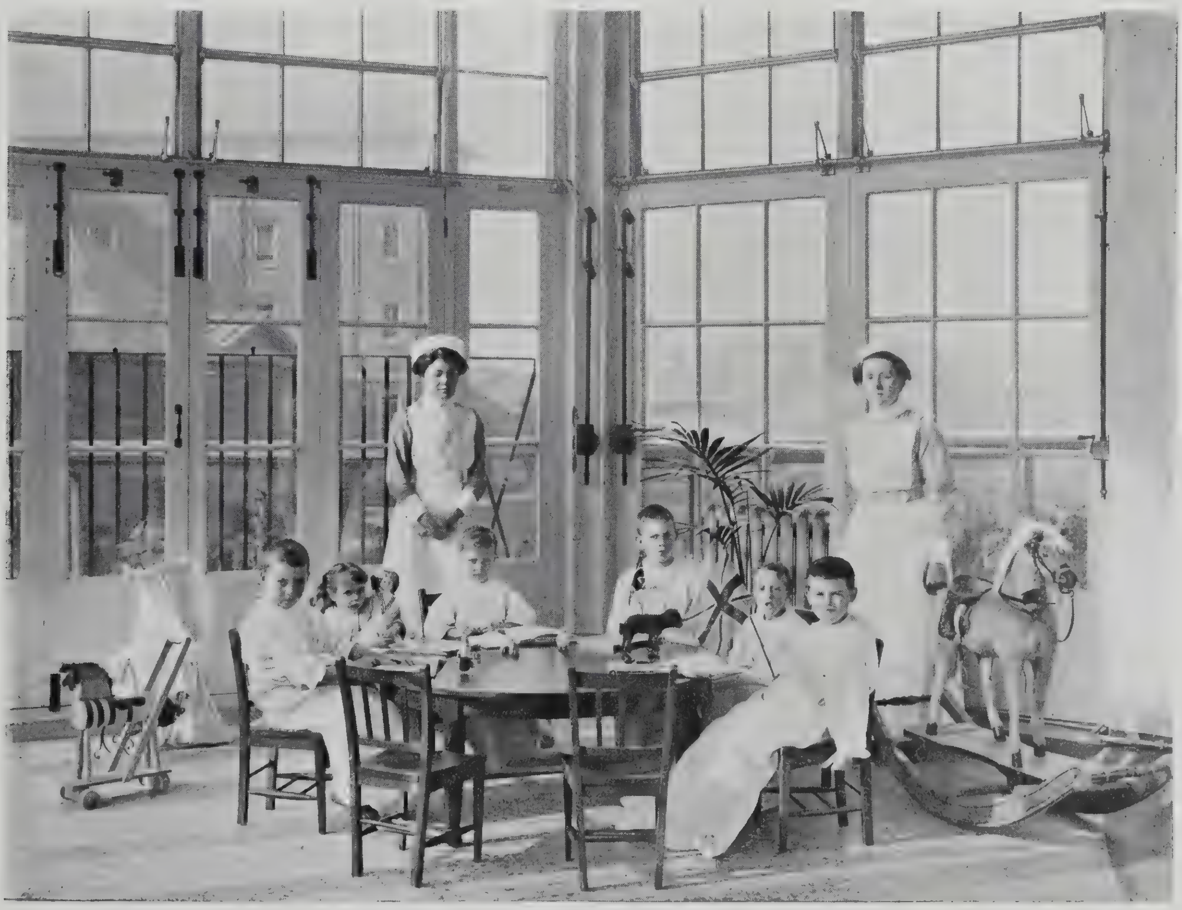


STUDENTS' DRAWINGS (SERIES II.). XLIX.—THE ROTUNDA, CHELTENHAM.

BY GORDON HEMM.



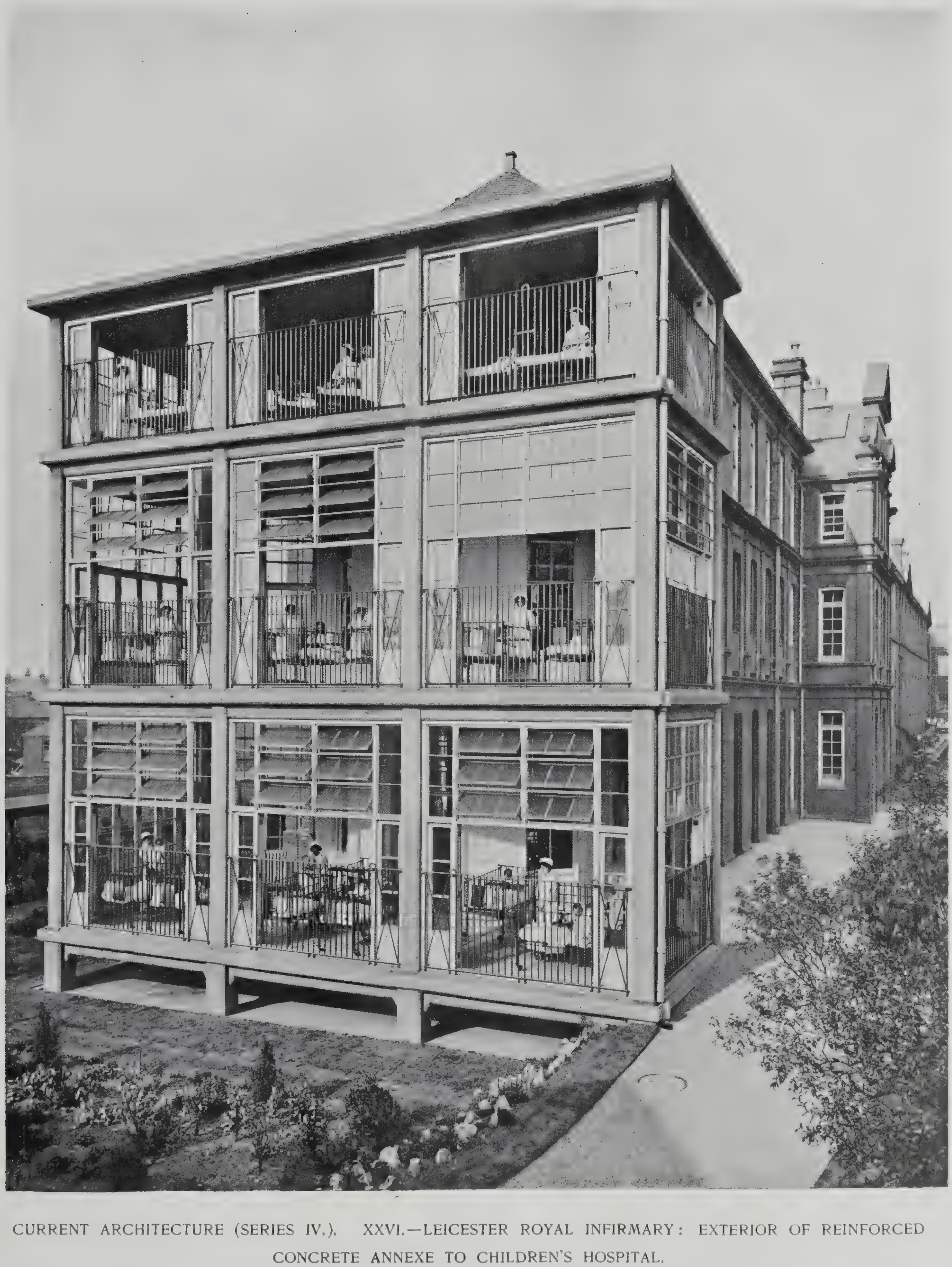
Interior of Sun Balcony.



Children on Sun Balcony.

CURRENT ARCHITECTURE (SERIES IV.). XXVII.—LEICESTER ROYAL INFIRMARY: ANNEXE TO CHILDREN'S HOSPITAL.

EVERARD, SON AND PICK, ARCHITECTS.



CURRENT ARCHITECTURE (SERIES IV.). XXVI.—LEICESTER ROYAL INFIRMARY: EXTERIOR OF REINFORCED CONCRETE ANNEXE TO CHILDREN'S HOSPITAL.

EVERARD, SON AND PICK, ARCHITECTS.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

JULY 11, 1917. TOTHILL STREET, WESTMINSTER. VOLUME 46. No. 1175.

N our issue of March 14 we had occasion to comment on a letter which had been written to "The Times" by a lady to complain that rebuilding in the East ondon explosion area was being done in an unsatis-actory manner. Our hope was, as we said at the time, at the lady was perhaps generalising rather freely om insufficient data. It seemed incredible that such harges could be true; but it now appears that the case as not overstated. In the House of Commons on uly 3 Lord H. Cavendish-Bentinck asked the First ommissioner of Works why his department, in carry-g into effect the repairs to the houses affected by the xplosion, "had renewed floors over foundations of et mud instead of concrete, and, seeing that this ction on the part of his department was calculated ot only to endanger the health of the inhabitants, but involve a waste of public money, would he say what ction he now proposed to take?" One is glad that e question of health was put first; but why is it lways considered necessary to drag in the "waste of ublic money"? It is an accepted formula; but in is case the waste of money seems an unusually significant detail in comparison with the vital issue ith which it was associated on terms of equality.

* * * *

It cannot be said that Sir Alfred Mond's reply was nything better than a lame excuse for proceedings at, unless the case has been greatly exaggerated, are eplorable and indefensible. He said that the object f the work undertaken by his department on behalf f the Ministry of Munitions was the most rapid ossible reinstatement of the damaged property, and at object was undoubtedly achieved. Surely this as very inept. As the above-mentioned lady said, in er letter, "delay is better than disease." But if the rst portion of the First Commissioner's essay in pologetics limps perceptibly, the next detail stumps long on crutches. He had made inquiries, he said, as the possibility of compelling owners to contribute to e expense of effecting certain desirable alterations to eir property, but the powers were limited, and it was ot the duty of his department to reconstruct or alter e character of private property at public expense. oncrete under-floors were therefore not put in in those ouses where they did not exist before. Truly a lofty nception of duty! Consistently with it, the depart-ent should have been pained to be unable to put back e old materials—to drive rusty nails into rotten oards. "Private property" and "public expense" is very pretty antithesis, and alliterative withal; but hat of public unhealth at the public expense? No mount of casuistry can absolve the Government from e heavy moral responsibility of perpetuating a ndition that, on their own confession, they knew to eed a remedy, for it may be inferred that they tried get the owners to pay for concreting. It was splen-id to make reparation so promptly; but, by failing to o the thing handsomely, they have robbed the action f all its grace, and have incurred just censure where ey might have looked for grateful applause.

* * * *

On so painful a subject we would prefer to make no rther observation; but a sense of duty compels us to rotest against the sophistry of Sir Alfred's concluding ntence. "He denied the assumption that any action n the part of his department had endangered the ealth of the occupants of the houses, or had involved any waste of public money." This is too transparent an evasion. To lay floorboards over unconcreted foundations is to endanger the health of the occupants. He admitted that his department laid floorboards over unconcreted foundations. Therefore (the conclusion is inevitable) his department has endangered the health of the occupants. True, his department did not originate the danger, but they have perpetuated it when they ought to have abolished it. They have thus, however unwillingly, consented to it, and have therefore assumed for it the responsibility which Sir Alfred vainly attempts to repudiate. If there is to be discrimination, it should be rather in favour of the originators of the condition, who, fifty years ago, knew no better. From these conclusions there is unhappily no escape; and therefore the First Commissioner was driven to seek refuge in a flagrant *ignoratio elenchi.* As to the "waste of public money," that is a comparatimely unimportant issue. It would not be an isolated phenomenon. But it is lamentable to see a Government representative defending desperately a situation that would disgrace the Rural District Council of Slocum Todgers. It cannot be seriously contended that there is no waste of public money in applying it to a prospective waste of public health. Government example in sanitary housing should be beyond reproach; and these paltry pleas of emergency and economy are of ill augury. We hope that Lord H. Cavendish-Bentinck will return to the charge, and that he will be vigorously backed by the friends of social welfare.

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Ruskin, it will be remembered, had the idea that women would make excellent rent-collectors and house-agents, and he employed Miss Octavia Hill to perform these offices for his own property. How admirably she succeeded is on the records, and in the course of her work she collected sociological data that have been of great service to students of humanity and of the housing question: subjects that, indeed, cannot be properly studied separately. Until now, Ruskin's example has not been very widely followed, perhaps because of the unpopularity of the widow or the spinster as the agent of her own property. It is a general complaint that lady owners are far more exacting than men and are less conscientious in fulfilling their own obligations. Now, however, the dearth of men at home has necessitated the employment of women in this as in almost every other capacity; and a lady rent-collector at Manchester, we read, has been specially thanked by her employers—a housing company—on the success of her work. It is added that the personal interest taken in the tenants as well as in the houses is an influence for good, while a large number of men and women engaged on active service or in war work warmly appreciate the interest shown in their homes and families during their absence. That is what might be expected to occur where the lady happens to combine shrewdness, firmness, and kindness—qualities that are perhaps less rarely united in women than in men. But, in truth, to deal successfully with the manifold difficulties of this usually rather thankless task, the lady house-agent should be "A perfect woman, nobly planned To warn, to comfort, and command." Manchester "has got the goods."

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It is not too late, we trust, to protest yet again against the ill-conceived scheme of erecting public abattoirs on the old infirmary site at Newcastle. It is bad enough that what was at first dedicated to art should be given up to slaughter—that the scheme for an art gallery should be abandoned in favour of shambles—but there is a more utilitarian argument to be urged. On the announcement that the Newcastle Sanitary Committee had prepared a scheme for abattoirs, a correspondent of the "Newcastle Chronicle" lodges a vigorous protest against "the erection of a building to accommodate such offensive operations in the very centre of a large city and upon the main road and artery east and west." The site, he declares, is worth at least £80,000—a sum that seems a great deal too large to be wasted on such a project. By "offensive," the correspondent probably means that the mere sight of an abattoir has that effect on sensitive natures; for it must be admitted that a modern scientifically constructed abattoir does not otherwise create much nuisance, although one must add the important qualification that the nauseating idea of it cannot be entirely suppressed. But, like the hospital, the factory, and certain other buildings, which are to be classed as necessary evils, the abattoir should be placed where it can be but little seen of men, and still less of women and children. As for flaunting its inherent indecency in the centre of a great city, that is an act of barbarism that should be forgidden by law. What can the Newcastle burgesses be thinking about to commit themselves to this stupendous act of folly? Parliament should be asked to intervene, lest Newcastle build to its own hurt and sacrifice its fine reputation at the shambles.

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Dublin is now in the throes of the great question of brick versus stone. All the other opportunities for dispute over the rebuilding of the city having been exhausted, some ingenious person has thrown into the arena this new apple of discord, and the citizens may be trusted to make the most of so grand an occasion for wielding the blackthorn. Of course, the question is immediately invested with political or national importance. Red brick with stone dressings is an injustice to Ireland. Considering, no doubt, that the general use of stone would be ruled out by its cost, the City Architect suggested red brick as the material with which to secure harmony of design. The citizens, however, will have nothing to do with any sort of harmony. If he had said stone, they would probably have clamoured for brick; now he says brick, they naturally agitate for stone. They were a few weeks back rating the Government roundly for delaying the importation of materials, and almost in the same breath loudly demanding that none but Irish materials should be used—an attitude that is no doubt quite explicable, although unfortunately it wears the superficial appearance of inconsistency.

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This opportunist objection to "foreign" materials amounts almost to a mania, and is apparently a recrudescence of the gentle art of boycotting. Irish patriots lose no opportunity of parading it. A member of a deputation which last week waited on Dublin Corporation said "the corporation had an excellent opportunity of giving a fillip to Irish industry and preventing the importation of artificial stone or machines to make concrete blocks. They should insist on Irish materials being used." They do—eloquently and persistently—that is, whenever it suits their purpose. If this eternal talk about developing Irish industries, exploiting Irish quarries, encouraging Irish art, and so forth, were really translated into action, Englishmen would be delighted; for nothing would please them better than to see Ireland prosperous and happy. But they grow rather weary of barren talk which seems rather directed against themselves than towards amelioration. It may be presumed that the Dublin City Architect has excellen reasons for his decision; but it seems doubtful whether reason will prevail against the determined opposition of interested traders. Consequently, the rebuilding of Sackville Street may result in the heterogeneous hotchpotch which is the usual Nemesis of rebellion against control.

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A part of Clement's Inn, it seems, has been taken over for Government service. Clement's Inn was formerly approached through a fine arch, which had to be pulled down when the Law Courts were built and the necessity for its demolition must have given G. E. Street a pang of compunction. That the Inn is of very respectable antiquity may be inferred from Shakespeare's reference to it in 2 Henry IV., Act iii. Sc. 2, where Master Shallow says, "He must to the Inns of Court. I was of Clement's once myself, where they talk of Mad Shallow still." It is perhaps earlier than the sixteenth century, as it is said to have been inherited by the Earls of Clare from William Hollis who was Lord Mayor of London in 1539. It is one of the Inns of Court, which were so named, it seems without direct reference to the law. They were the temporary residences of young noblemen attached to the royal court, or related to such courtiers. They usually had their tutors with them, and so the inns became places of study; and as the law was the chief subject to which young men of "quality" were expected to give attention, the inns naturally developed ultimately into lecture-halls or places of study for men reading for the Bar. The hall of Clement's Inn is an interesting specimen of old brickwork, and among the interesting pictures it houses is a rather fine portrait of Sir Matthew Hale, who was made Lord Chief Justice in 1671, was the author of a "History of the Common Law of England," and strange to say, was something of a poet. His chief claim to remembrance, however, is his sturdy insistence upon the then new and strange doctrine that the law should be "throughly purged" from the taint of political partnership.

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It is with extreme regret that we record the death of Mr. Gerald Callcott Horsley, who in precept and example was a very valuable member of the profession. In particular, he will be sadly missed from the counsels of the R.I.B.A. and the Architectural Association, as he was one of the comparatively few men of whom it can be said that they never join a committee or take part in proceedings without contributing substantially and luminously towards the evolution of sound policy based on rational ideals. The son of John Callcott Horsley, R.A., he was educated at Cranbrook School, Kent, at Kensington School, and at the Royal Academy Schools, he was articled to the late Norman Shaw, R.A., was Owen Jones student of the R.I.B.A. in 1887 and 1888, and commenced practice in 1888 in Bloomsbury. He was president of the Architectural Association in 1911-12, and again in 1912-13, and was elected a member of Council of the R.I.B.A. in 1913-14, and hon. sec. of the Board of Architectural Education in 1913. He was one of the select band of contributors to the famous volume on "Architecture a Profession or an Art" (1895), and the author of many papers on professional subjects. He designed St. Paul's Girls' School, Brook Green, Hammersmith; several churches in Staffordshire; the offices for the Universities Mission to Central Africa, Dartmouth Street, Westminster; some important domestic work in Surrey, Sussex, and elsewhere; and parts of station buildings at Harrow and Pinner. As he was only fifty-five years old, it may be said that he died in the fullness of his powers, and that, given the opportunity and inclination, he might have achieved a reputation comparable to that of his great master.

HERE AND THERE.

WHAT is art? Nobody knows, and that is why everybody tries to tell us, and why the subject is of perpetual interest. To discover what it ally is would be calamitous. We should lose one of e most delightful themes of discussion; we should ck all the excitement of the chase, and all our ardour r it. Fortunately we are in no danger of solving the igma, the theorists of to-day being rather less nvincing than Aristotle. And how delightfully riable and mutable they are! Although, as we all presently see, they are sometimes diabolically ischievous. We never—or hardly ever—grow tired reading them, although their disquisitions merely crease our perplexity. For the more we read about t the less we understand it. Sometimes we grossly isunderstand it, as the Boches have misunderstood ietzsche. We do not want to understand it. If we uld surprise the secret of, say, a noble building, and uld thereafter produce equally noble buildings in cordance with established formulæ, recipe, or pre- ription, as a housewife produces frocks and plum- ddings, then farewell art. Architecture would be base mechanical" and deadly dull—as, indeed, much it already is, from a variety of causes.

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Certain principles, it seems, have been more surely certained than followed. Too often they are grossly isapplied—perhaps in a desperate effort to break vay from "the slavery imposed by the classic canon." or says Ruskin, "In the mediæval, or especially hristian, system of ornament, this slavery is done vay with altogether; Christianity having recognised, small things as well as great, the individual value of very soul." It is perhaps in the striving for dividual expression that, as Mr. Anthony M. udovici has unkindly mentioned, architects some- mes perpetrate such solecisms as "structural expe- ients used as ornaments, the most rigid parts of ildings in form (the rectangular parts, etc.) placed ear the roof instead of in the basement, and pillars anding supporting, and supported by, nothing."

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He goes on: "Elsewhere we see solids over voids, ullions supporting arches, keystones introduced into ntels, real windows appearing as mere holes in the all, while the ornamental walls are mere shams, and lasters resting on keystones; and, everywhere, we e recent requirements masked and concealed behind reek, Roman, Gothic, Renaissance, Rococo, and aroque embellishments, thrown together helter- elter, and with a disregard of structural demands hich must startle even the uninitiated." Very little itiation is required, one may suppose, to discern the becility of putting up a rather imposing balcony with opening behind it. Access to it would require a dder. This seems incredible, but I can vouch for it ersonally, and also for the disconcerting sequel that any people who are, perhaps rather rashly, presumed be intelligent, have condoned and even admired is dummy balcony because, as most of them say, in ppropriately stupid phrase, "it adds to the appearance the house." It does; and the huge wart which ded to the appearance of Oliver Cromwell's nose as, though a less pretty, a more natural excrescence. n even more flagrant violation of the grammar of nament is the so-called steeple of the church of St. hn, Horselydown. Here we have an Ionic column pporting nothing weightier than Carlyle's "mostly- ols" proposition.

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As to that, Carlyle should have been thankful that e are not mostly brutes as well. His favourites the Germans have both qualities highly developed, and in intimate combination—a "rich mix" of them. Two or three years ago, the editor of the "English Review" wrote this: "Here is a scene, a common sight all over the Fatherland. Having unloaded the sand from his cart where a house was being built, the driver was mercilessly flogging his two horses to extricate the vehicle, all four wheels of which were thickly embedded in sand carelessly left in front of them. As I watched, another man came up with another whip and the two men proceeded to slash at the beasts across the head and under the belly like maniacs. When, incensed at this brutality, I pushed one of the men away, other labourers came up and threatened me with hods and pickaxes, and, seeing an officer, I ran across to him to beseech his intervention. He politely came, looked at the wheels, looked at the horses trembling and snorting with fear, and then said, in the staccato tones affected by his caste, 'Animals not strong enough.'

* * * *

"Immediately the shouting, the thrashing, and the frantic efforts of the horses, began again, and at last the sand gave way and the cart got free. Now, the point to notice is that all that the officer had to say was that the animals were not strong enough, whereas a spade in one minute would have removed the mounds of sand clogging the wheels, as anyone not a brute or a fool would have seen at once. But neither the officer nor the workmen there did see, because it never occurred to them to consider that aspect. Their attitude was to force the cart straight through, not to give themselves trouble or worry about the feelings of the horses. And all over Germany, wherever building is being done, similar scenes occur daily, and occur deliberately." The German working classes, Mr. Austin Harrison adds, "are the most brutal in Europe." So also are the buildings they erect.

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This brutality of the German builders' labourers, and its reflex expression in German buildings, is often traced to Nietzsche's Will to Power doctrine, but probably goes much further back. Nietzsche, however, had a theory of art, which Mr. Ludovici has endeavoured to expound ("Nietzsche and Art"). In his "Will to Power," Nietzsche said: "The greatness of an artist is not to be measured by the beautiful feelings which he evokes: let this belief be left to the girls. It should be measured according to the extent to which he approaches the grand style, according to the extent to which he is capable of the grand style. This style and great passion have this in common—that they scorn to please; that they forget to persuade · that they command; that they will." All this scorn, forgetfulness, and brutality are faithfully reflected in the German building of to-day, but in a way that would have given Nietzsche fits. It would have served him right. He should have expressed himself more definitely. No mortal man knows what his mad rhapsodies mean—the only thing certain is that they mean nothing good. It is from his vicious vapourings that the Huns have condensed their poison gas. Nietzsche had, however, one glimmering of sanity—he heartily despised the Kaiser. Most art theorists have been misinterpreted in a grotesquely foolish way. Fortunately their gospel is usually bland, and is sometimes beneficent; and they are, generally speaking, amusing creatures, if only people would not take them too seriously. But, as "Punch" said, "One touch of Nietzsche makes the whole world sin."

DIOGENES.

CORRESPONDENCE.

The Work of John T. Emmett.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—The views of John Emmett on architectural training and design have been quoted recently on more occasions than one. He was an able, scholarly writer, possessing very clearly defined ideas and almost incredible boldness and freedom in criticism of the work of contemporary architects. He contributed some interesting essays to the "Contemporary Review," in which he expressed the opinion, adopted widely in later years, that as an artist must produce his work himself, or, at any rate, must be qualified to do so, the artist in building must necessarily be a craftsman; and a professional architect, while he might certainly be an artist in drawing, could not possibly be an artist in building.

His essays betray inconsistencies, for, while he condemned the professional architect and all his methods, he still found praise for many buildings produced by the methods which he deprecated. Especially marked is the difference between the views he expressed and the buildings produced by himself. They possess very considerable merit, but there is no mark on them of the craftsman as designer; some account of him and his work would therefore be interesting, especially if it dealt with the growth of his ideas on the production of architectural design. He had ceased to practise as an architect before 1874, when his essay on "The Hope of English Architecture" appeared, and perhaps his attitude towards the whole matter had developed and changed to a very material extent since he had been engaged as an architect.

I believe his principal building was New College, Hampstead, facing Swiss Cottage Station, opened in 1850. It lacks the lately discovered quality of "texture," being built throughout in smooth ashlar of uniform colour, and being roofed with Welsh slates, but it possesses the essential qualities of a really good building, and the first thing to be noted about it is that it is well disposed on its site, a good distance from the road and high enough above it to look dignified. One cannot help feeling that the placing of the building has had careful consideration, and is an important factor in the success of it. Then the building starts well with a good bold plinth, which gives a firm base line such as few modern buildings possess. It is very symmetrical, but not slavishly so, for the library at the south end is balanced by the principal's house at the other end, different in design and yet carrying out the main intention of symmetry. The central tower stands out boldly and has an extremely good outline, especially against the sky. The buttresses and other features, which project from the lower part of it, are dropped at the roof level, leaving a simple square of good proportion, with an adequate and practical-looking turret at one angle. Then, again, there is a sense of really good proportion not only in the whole mass, but between the details and the mass; and while the long unbroken roof level is strongly maintained, there are projections that build up the mass into a sound and interesting composition; and, be it noted, the projections, like the turrets of a French château, seem part and parcel of the building itself rather than ornamental accessories applied to it. Further, the details of the building give the impression of being practical first and ornamental afterwards. Still, the whole thing is imitative, and if measured drawings of it were published it might well be mistaken for actual fifteenth-century work; and herein lies the discrepancy between the author's works and his words, for he advocated personal and direct expression in all things.

Another of his buildings, New College Congregational Church, near to the College, is work to which precisely similar criticism may be applied. It presents a capable and scholarly revival of well-developed decorated Gothic, somewhat overdone, perhaps, in the number of its parts, but the parts are good in themselves and well disposed, and the whole building shows a capable designer.

There is another Congregational church designed by him in the North of London, at Camden Road; and here, again, the work is well designed and shows capacity beyond the average of its time.

It is curious to find an architect of the character that these works suggest developing later into an enthusiastic and forcible pioneer of the Arts and Crafts movement, and for my own part I should be interested to hear more about him.

ARTHUR KEEN.

4, Raymond Buildings, Grays Inn, W.C.
June 30, 1917.

[As Mr. Emmett's writings are more familiar to us than his architectural work, we, like Mr. Keen, should be glad to hear of other examples. As we have shown in former issues, Mr. Emmett was a powerful and fearless writer of the "slashing" or "swashbuckling" school, and his articles in the "Quarterly" of April, 1872, and October, 1874, and in the "British Quarterly" of October, 1875; April, 1870 and April, 1880 and 1881, made a considerable stir. They were afterwards issued separately, but have been long out of print.—EDS. A. AND B.J.]

THE PLATES.

Northern High School, Detroit, Mich.

THIS is a building of considerable size, being planned to accommodate 1,200 pupils. A combined plenum and exhaust fan system is used for ventilation, the air being mechanically humidified and tempered, and the supply of air, as well as its temperature and humidity, being mechanically controlled. The walls are of rough surfaced brick, with terracotta trimmings, and the roof is tiled. The corridor floors are of terrazzo, with plaster walls, but in the rooms hard maple floors are used. The interior woodwork is largely of oak. The building worthily upholds the reputation which modern American architects have achieved for broad, direct, and dignified composition. Our reproductions are made by courtesy of "The Architectural Forum."

Drawings of Elgin Cathedral.

We publish on the double-page plate in this issue a fine measured drawing of the vaulting to the Chapter House, Elgin Cathedral, and on one of the single-page plates a perspective sketch of the same subject. These drawings were made in 1913, and are the work of Mr. George H. G. Holt, who, lately a student of the Architectural Association, is now a pilot in the Royal Flying Corps. A further large drawing (of the east front of the cathedral) will appear next week.

Sketches of Village Churches in France.

We reproduce on two of the plates in this issue a number of delightful little pencil sketches of French village churches by Mr. Percy E. Thomas, who, before the war, was a partner in the firm of architects of Ivor Jones and Percy Thomas of Cardiff. Mr. Thomas, who is now a lieutenant in the Royal Engineers, and is serving in France, has jotted down these sketches during the odd moments of leisure that he has been able to find while moving about the country from place to place. The diminutive church is a characteristic feature of the French village, and usually it is by no means lacking in architectural attraction, as may be judged by Mr. Thomas's sketches. Many villages are of course within easy range of shell fire, and it is almost superfluous to add that the German gunners have made the most of their opportunity. Some scores of these delightful little churches have been battered to fragments. Mr. Thomas shows us none that has been very badly knocked about, though several were well within the shell area before the Germans made their big retirement a few months ago. The villages of Sailly-au-Bois and Bayencourt, for example, used to lie about two kilometres behind the old firing line, and the Germans were always dropping shells into them, though, oddly enough, the churches managed to escape serious damage.

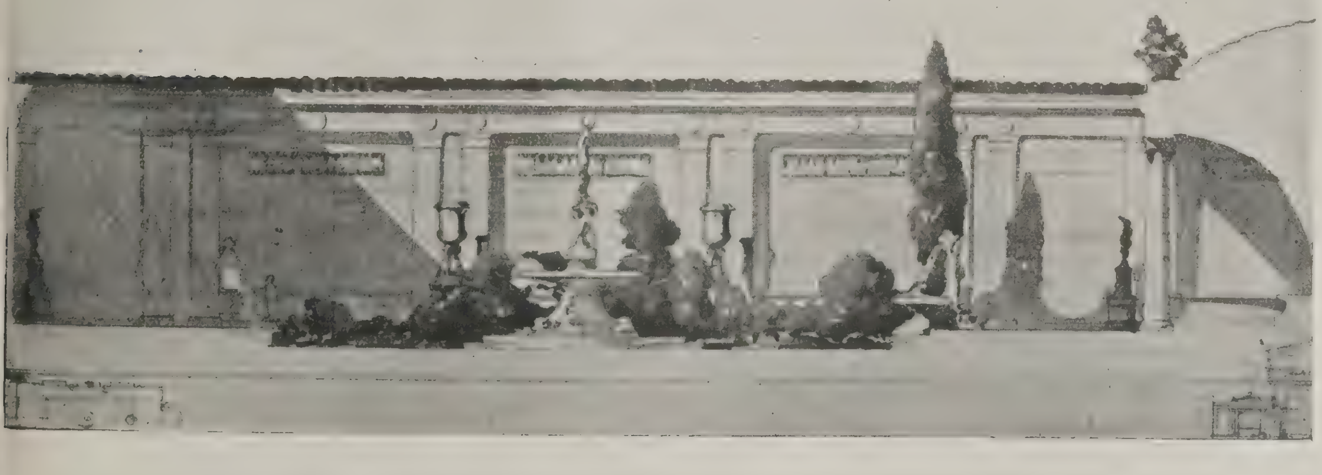
A PARTY WALL FOR A LONDON GARDEN.

PARTY walls, especially in London, are seldom beautiful. More often they would be exceedingly ugly but for the kindly intervention of Nature, who hates ugliness. Give her a chance, and he will decorate the wall with mosses and lichens, with the rich green and old gold of the stonecrop, with he turquoise blue of the toadflax, or, where the mortar has crumbled, or has been pecked away by the predacious sparrows or the vagrom pigeons, she may ven plant a gay gillyflower. She will wash and mottle t with her rains, and with her searchlight sunshine will how on a piece of clean brickwork more colours than would suffice to compose a palette for Mr. George Clausen or Mr. Yeend King, who both knew well—none better—the chromatic character of common (or arden) brickwork, whether it be new or old. Party wall disputes would be more common, did not Nature nvest old walls with a winsome grace that, charming he eye, softens the heart and averts it from the alien hought of litigation.

Even in London, the peach, the vine, the fig rest nd ripen on the ample bosom of many a grand old wall; or for a brief season the honeysuckle may weeten it, the wisteria bedizen it, the tall hollyhocks end and borrow in contrast with its horizontal stretch. London walls that are thus adorned and glorified are ecessarily few, but are to be found in the byways of Westminster and in the back alleys of the City. It is etter not to seek them with diligence, but to come pon them unexpectedly, and thereupon to reflect that hey may be the survivals of the days, not so very long go, when the London merchant slept over his shop nd took his solace in a goodly back garden, wherein e could cull a nosegay or gather healing or potable herbs; or whether, when the wall is observably ancient it may not derive from the more remote time when the monks and friars—black, white, grey, as their garb might go, and Augustinian or Austin—cultivated vegetables in their vast monastic gardens, and grew enough and to spare—some for the markets, and some for charity. Garden cities! London was once more garden than city. Then St. Giles was indeed in the fields, and the wains had not far to rumble to the Haymarket.

Mr. R. A. Duncan shows us a wall of stone, with Art anticipating Nature in its adornment. With its panels and pilasters, its fountain and its friezes, it is too elaborate for private adoption, except perhaps by some metropolitan magnate who remembers his Pliny. It is more fitted for the enclosure of some small park, some converted churchyard, where workers may rest and children play, a breathing space where twittering birds flit joyously, where the eye may feast on the refreshing greenery of grass and shrub and on the sparkle of dancing water, and take in also maybe subconsciously, some sense of beauty and order and dignity from the decorous work of man. That, one may imagine, was the gracious thought that inspired Mr. Duncan's simple and beautiful design, with its organic and harmonious decoration.

Walls like this would fittingly enclose some portion of our smaller parks. They might be erected as war memorials. In the heart of the City there is a "Postmen's Park," where a wall is, at the suggestion and with the help of the late G. F. Watts, made to serve as a memorial of the brave deeds of civilians—men and women, boys and girls, who sacrificed their lives in the effort to save others from burning, from drowning, from being run over, or from other calamities. There is, if one remembers rightly, a memorial to a noble doctor who gave his life in the endeavour to suck away the virus of diphtheria from the throat of a child. Alice Ayres, who might easily have saved her own life at a fire, but refused all persuasion to come out herself until she had effected the rescue of several children, when she sank back into the furnace and perished nobly, is commemorated there. Simple faience tablets, with uniform lettering, suffice to glorify this particular wall; but when the practice is extended, as one hopes it will be, walls to commemorate military and naval as well as civil heroism, may well assume a more elaborate character, and may perhaps be adorned with statuary, as well as tablets. There is only one objection to this adaptation of walls, and that is that it would bring sad proud memories into what is primarily intended as a pleasaunce.



WALL TREATMENT TO A PARTY WALL IN A LONDON GARDEN.

BY R. A. DUNCAN (4th Year Student A.A. School, 1914-15).

NEWS ITEMS.

York Minster Windows.

The recent taking out of the stained-glass windows in York Minster, in view of possible air raids, is a continuation of the scheme of the late Dean Purey-Cust for their cleaning and repairing. Before the war, as each window was renovated, it was replaced, but now, owing to the risks of damage by enemy aircraft, it has been thought wise to store the original windows and substitute plain glass, pending a return to normal conditions. Already there are nine of these plain glass windows, the originals being carefully preserved.

Leeds Builders' Wages.

The Leeds Master Builders' Federation have received from all the operatives in the local building trades an application for an advance of 5d. an hour. The claim is made by the newly formed Leeds and District Allied Building Trades Council, which has 4,000 affiliated members. Masons have at present 11¾d. an hour and bricklayers 11½d. On behalf of the men, it is urged that the advances granted since the beginning of the war do not cover the increase in the cost of living. One of their representatives has declared that the only offer made by the masters since the sending in of the new application was an advance of ¼d. an hour, and, unless another offer was made, that would be submitted to a mass meeting of the men this week as the reply of the masters.

South African Labour Dispute Settled.

What threatened to become a serious deadlock between masters and workmen in the building trade has been amicably averted by the former agreeing to offer their employees an increase of 2d. per hour. At an aggregate meeting of the building trade workers affiliated to the Federation of Trades it was decided to "down tools" unless the concession was granted. The carpenters, bricklayers, painters, masons, and plumbers were represented. The secretary of the Building Trades Union stated that the men were tired of waiting for an increase in wages due to higher cost of living. He added that certain builders had offered to pay the 2s. 8d. per hour recommended by the Conciliation Board, but that these offers had been refused on the ground that any concessions made by individuals would lead to a break-up of the Master Builders' Association. The meeting recognised that ultimately the masters and workmen would be able to reach a satisfactory arrangement.

Edinburgh Architectural Association.

A large party of members of the Edinburgh Architectural Association visited the new garden city near Rosyth, by permission of the Scottish National Housing Co., Ltd. Mr. A. Hugh Mottram, architect, conducted the party over the city. Great interest was shown in the different types of houses and the general planning of the scheme. Dunfermline Abbey was visited in the afternoon, by permission of H.M. Office of Works, when Mr. Macgregor Chalmers, F.S.A. (Scot.), Glasgow, acted as leader. He exhibited and explained the plans of the recent discoveries made by him of the small pre-Norman church—in which Malcolm Canmore and Queen Margaret were married in 1069—with the later addition made to it by Queen Margaret, under the floor of the nave of the Norman Abbey built by King David I. A hollow floor carried on steel joists is in process of construction over these interesting remains, in order that they may be permanently accessible, and the cost of this work has been generously contributed by the Carnegie Trustees. Special mention may be made of the discovery of a pre-Norman cushion capital from one of the tower windows of the ancient church. Pittencrieff Glen, Hill House, and the Carnegie Baths were also visited later in the day.

Iron and Steel Shortage in New Zealand.

The shortage of galvanised corrugated iron in New Zealand is, according to a "Times" correspondent, causing great inconvenience, and it is believed that there is none of this iron of 26 gauge—that most in use in New Zealand—in stock in the Dominion, while stocks of 24-gauge are practically exhausted. This iron is the standard roofing material. Tiles and asbestos "slates" are being used, and it would seem that it is only a matter of time before shingles will be used again, if the fire insurance offices can be induced to modify their natural objection to this form of roofing material. Sheet steel is extremely scarce, and there is but little prospect of obtaining further supplies in the near future. A fair quantity is used by galvanisers for various purposes, also by manufacturers of heavily tinned dairying vessels. Steel bars are running very low, and while it is true that high prices are to some extent restricting business price is rather of less moment than delivery. Steel piping is also in very short supply. In fact, all steel stocks and stocks of steel goods, such as chains, rods, and boiler-plates, are reduced to a fine point, notwithstanding the measures taken to conserve them. From Canada supplies of fencing wire and wire nails are being obtained, also some wire netting. The United States is also being drawn upon for nails and staples and shop goods. British manufacturers and traders will no doubt carefully note this information, which, though it may not be of immediate service, is of practical importance as showing the character of one of the great markets in which—ere long, we may hope—they will compete vigorously against foreign rivals.

OBITUARY.

Mr. Gerald C. Horsley.

The death took place at Crowborough on July 2, of Mr. Gerald Callcott Horsley, F.R.I.B.A., of 28, Bedford Gardens, Kensington. The youngest son of the late John Callcott Horsley, R.A., he was fifty-five years of age, and was educated at Kensington School, and afterwards was articled pupil to Mr. Norman Shaw, R.A. He became a student of the Royal Academy, and was the Owen Jones travelling student of the Royal Institute of British Architects (1887, 1888). He was a past president of the Architectural Association. In 1895 he married Susan, daughter of the late Mr. Peter Black, Glasgow. For an editorial note on Mr. Callcott's career, see page 12.

Captain Ronald Lindsay Johnson.

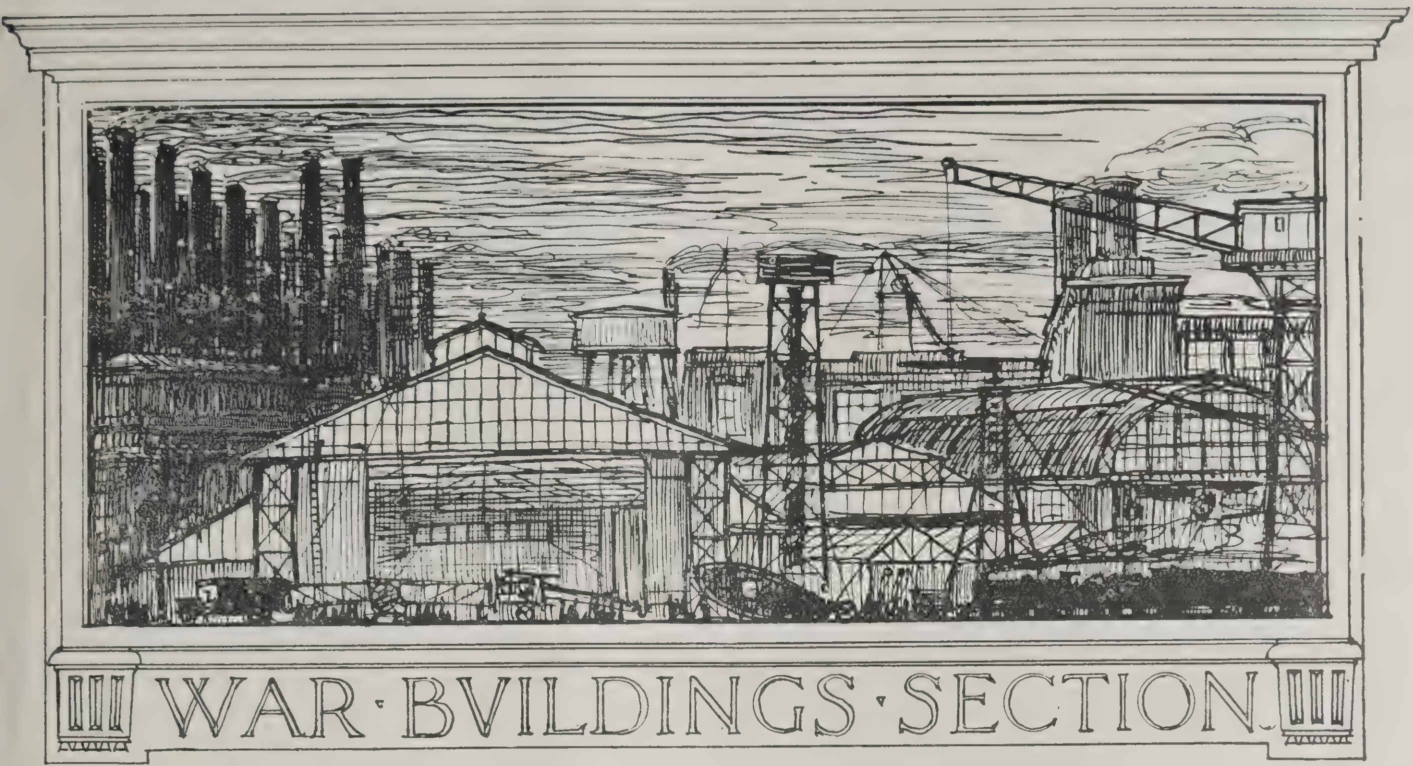
Captain Ronald Lindsay Johnson, R.F.A., who is reported to have been killed in action on Monday, May 28, was the fourth and youngest son of the late Mr. William Henry Johnson, B.Sc., and Mrs. W. H. Johnson, of Woodleigh, Dunham Massey, Altrincham. He was born at Woodleigh on September 24, 1889, and was educated at Summer Fields and at Eton College, where he was head of Mr. E. L. Vaughan's house. He proceeded to King's College, Cambridge, and took an honours degree in classics. He was a member of the Cadet Corps at Eton College, and of the Officers' Training Corps at Cambridge. In 1912 he went to Australia, and entered the branch office in Sydney of the well-known Manchester firm of Messrs. Rd. Johnson, Clapham and Morris, Ltd., with which his father was so long connected as chairman and managing director. Here he spent two years in mastering the details of the firm's business. Immediately on the outbreak of the war he gave up his position and returned to England, and at once received a commission in the Royal Field Artillery. He went to the front in August, 1915, was wounded in September, 1916, and returned again to the front in the following December. On the death of his eldest brother, Captain W. Morton Johnson, Manchester Regiment, who fell while leading his men into action on July 2, 1916, Captain Ronald Johnson was appointed chairman of Messrs. Rd. Johnson, Clapham and Morris, Ltd., which position he held at the time of his death.

Mr. Stephen Sherwood.

Mr. Stephen Sherwood, of 200, Herbert Road, Plumstead, who has died at that address, in his eighty-sixth year, was a builder and one of the oldest inhabitants of Woolwich. He built No. 200, Herbert Road, more than fifty years ago and resided there from then until his death. He was an active member of the Woolwich House Owners' Association for upwards of twenty years and for many years past a member of the Woolwich Chamber of Commerce.

SPANISH ARCHITECTURE.

The earliest buildings of the Plateresque school in Spain (writes a "Times" reviewer) are amongst the best. The Hospital of Santa Cruz at Toledo by Enrique de Egas shows a correct sense of scale in the façades and in the colonnade of the *patio*, while the reticence of its ornamentation is free from the coarse exuberance which too often affronts the eye. He ha been equally successful in the Hospita Real at Santiago de Compostella. Ega had individuality and was something more than an imitator. There is a trace of Mudejar influence in his work, and ou of the various elements he dealt with he succeeded in evolving a distinctive style Covarrubias, his son-in-law, who was se to modernise the Cathedral at Toledo adopted in this decoration a florid unsymmetrical manner which is more tolerable when he is associated with Alonso d Berruguete, the finest contemporar sculptor. His best work is in the Archiepiscopal Palace at Henares and in the *patio* of the Alcazar at Toledo. Burgo was yet unfinished when Renaissance decoration came into fashion, and it Plateresque additions were chiefly mad by Francesco de Colonia and Diego d Siloe. The Casa Miranda and the Peñaranda Palace, two magnificen dwellings in the new style, are falling t ruin. The great house in Spain—whether in town or country—is quit unlike the Italian villa, the Frenc château, or the English mansion. Th Spaniard followed the Moor in demanding a certain amount of seclusion for hi women. The kitchen was on a meagr scale, as the Spaniard never regarde cookery as a fine art, the food being sometimes prepared outdoors. The garde and the park scarcely exist at all.



MODERN FACTORY BUILDINGS.

BY WALTER R. PERKINS.

The proper planning of a factory involves the highest degree of co-operation between the owners or the managers of the industry, on the one hand, and the architects and the engineers on the other. In order that buildings may be properly adapted to their uses, it is essential that these uses be fully known to the designer, and this requires complete and thorough explanation on the part of the owner, for the omission of some vital factor at this preliminary stage may later necessitate costly changes which a few words in time would have obviated.

The factors affecting the planning of industrial buildings are many and various. They include, besides those concerned in the actual operation of the industry, problems of construction, finance, lighting, sanitation—using the word in its broadest sense—and transport. In all these problems, except those of a financial nature, the architect or the engineer is necessarily more versed than the manufacturer himself, even as the manufacturer is more expert in his particular form of industry than the consumers whom he supplies. The only difference is that the one sells goods with values of a tangible nature and easily appreciated, while the other sells services, which are more intangible and whose true value is often overlooked.

The buildings used in manufacturing must necessarily vary in form, according to the nature of the work for whch they are to be used. They may, however, be roughly classified in three different categories, which will include most of the buildings in question. The first category is that of loft buildings several storeys in height; the second is the weaving-shed type, one storey high with sawtooth roof; the third is the machine-shop type, also one storey high, but with large truss spans, and usually provided with travelling cranes. This classification, however, is not absolute, as a single establishment may include all of these types, built in conjunction with one another, but used for different purposes; while, of course, there are buildings that fall into none of the groups, such as, for example, coal pockets, grain elevators, and other similar structures. The classification indicates, however, the three most important types of building, the first two of which are becoming standardised to a considerable extent, while the third varies greatly in its design and proportions.

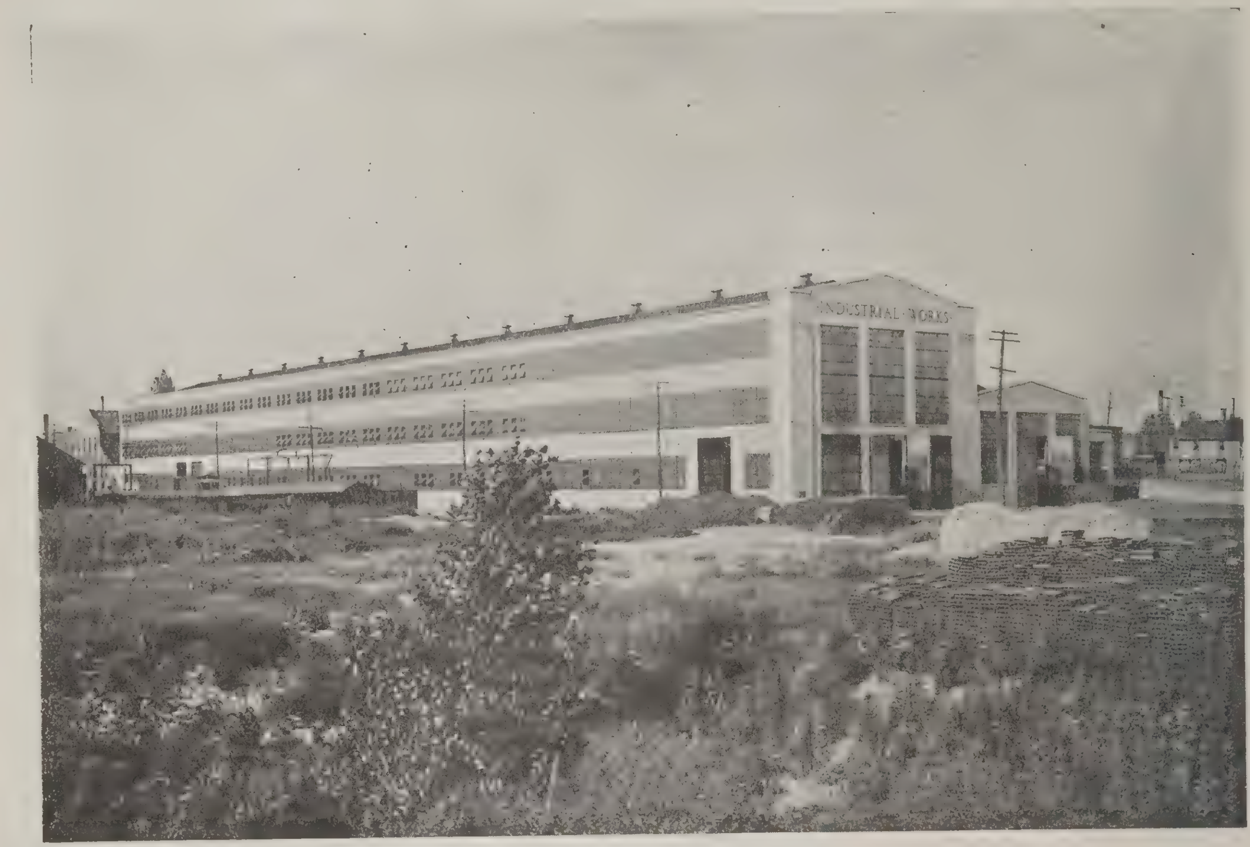
Where the materials and machinery used are not unduly heavy or bulky, and where land is moderately expensive—as it usually is in manufacturing centres where labour is readily obtainable—the loft buildings type is undoubtedly the best for almost all purposes. It uses the ground to better advantage than a one-storey shop, and can be designed to fit the requirements of any light manufacturing business. Originally built in frame construction, then in mill construction with brick walls, these buildings are now usually constructed fireproof, of steel or reinforced concrete, with brick or concrete walls. The old-fashioned wooden sash has been superseded by steel sash of various types, giving better light and lessening the fire risk. Solid interior walls, except for necessary fire walls and lift and stair enclosures, have been practically eliminated, the space being divided as required by light partitions carried on the floor slabs, which may be shifted to suit changing needs.

This possibility of change is one that needs to be taken into account in all industrial planning. A prosperous enterprise tends to grow and to require more space for its activities. The original lay-out, therefore, should be planned with a view to the possibility of future expansion without undue cost or inconvenience, so far as is possible. But even with the greatest care in planning it will be found that some departments have too much space and others too little, and the structural divisions should not be of such a nature as to make this rearrangement impossible in case the need for it should arise.

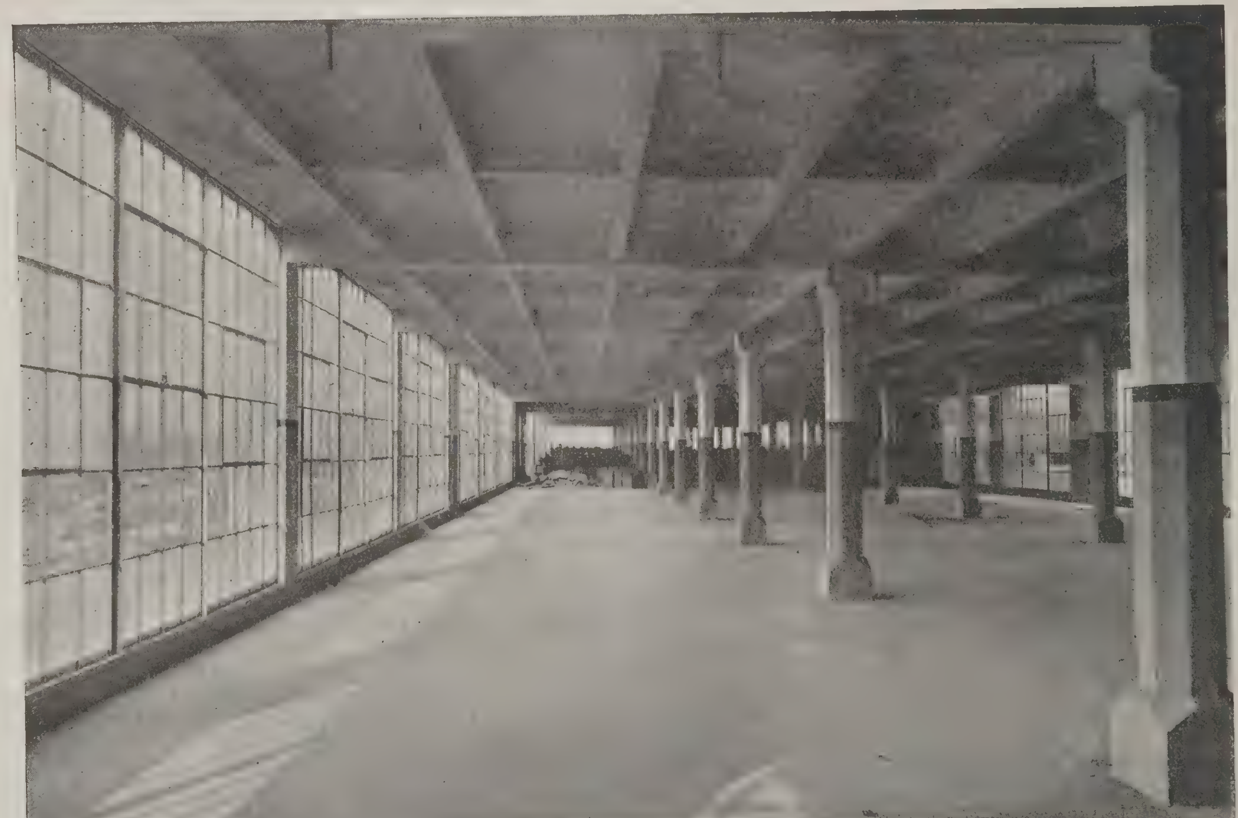
The space required for the various departments will determine the lay-out of the building, subject to the requirements of economical construction. In general, the lay-out should be planned so that a uniform spacing of columns may be possible. This spacing should be from sixteen to twenty-five feet. Special conditions may require longer spans, but these increase the cost of the building and have the added disadvantage of demanding girders of great depth, which may interfere with machinery, particularly where overhead shafting is used, and which make it harder also to light the building properly.

In planning buildings of this kind, the factory regulations must be taken into account. But even apart from these, it is to the advantage of the manufacturer to supply adequate sanitary facilities for his employees, and to protect both plant and employees from the fire risk by providing sufficient exits, installing automatic sprinklers, and using the best types of fireproof construction. Insurance may compensate for the value of goods actually destroyed, but it can never make up for lost records, time, and goodwill, or, above all, for the loss of valuable lives.

The width of the building, when it is more than one storey in height, is determined by the need of natural light. The proper width will, therefore, vary according to environment and the conditions of different industries. The attempt to build over too great an area often produces buildings that are practically useless. Where some portions of a building are not as well lighted as others, however, they may often be used for storage if the work



General View of Exterior.



General View of Interior: Note large area of window space.

INDUSTRIAL WORKS, BAY CITY, MICHIGAN.

is of a nature requiring or permitting this utilisation. While this type of building has many advantages, in that it makes the fullest possible use of the ground, is economical in construction, and allows the use of overhead shafting, it also has certain limitations. It does not permit of overhead lighting, except on the top floor; and the arrangement of machinery is limited by column spacing and the strength of floor slabs. Where a uniform lighting is needed throughout, the weaving-shed type is the most desirable; where very large and heavy machines must be installed, or a travelling crane is necessary to transport heavy loads, the machine shop type is the only one satisfying the requirements.

The weaving-shed type of construction, although it was, as its name indicates, originally devised for the use of textile mills, is now used for many other kinds of manufacturing. It affords a remarkably uniform light, without distinct shadows, throughout the entire area, a condition that is desirable for most classes of work. But it can be used only where land is relatively cheap, or on the top floor of a building which has ordinary side light on the lower floors.

The characteristic feature of this variety of building is its use of the saw-tooth roof, a series of unequally inclined ridges glazed only on the north side, which is the deeper of the two slopes and in many cases vertical. By this arrangement the lighting is very uniform, since no direct sunlight is admitted. On the other hand, the drainage becomes difficult, because of a large number of gutters that clog up with snow in winter. Again, the use of overhead shafting is seldom possible, a matter of importance in many lines of manufacturing.

The machine shop type of building is less capable of standardisation than either of the above. The spans, heights, and designs of trusses vary greatly according to the uses of the building. This type is used extensively for such shops as do heavy metal-working, and also for stone and other industries. Steel framing is more often used than for the other types already described, where reinforced concrete has usually been found more economical. The variety of these buildings is too great to permit their detailed description here.

Because of the uneconomical use of ground with one-storey buildings, they are often used in connection with others that are several storeys in height. In many cases the single-storey structure containing a travelling crane is made high enough to rise above the adjoining lofts.

We are accustomed to think that appearance matters little in so prosaic a place as a factory. We take it for granted that ugliness in a factory is natural and inevitable. But, as a matter of fact, there is no necessity that factories should be ugly. Many American factories are decidedly handsome. *All* factories might be at least tolerably presentable.

In designing a factory so that it shall be attractive, one does not proceed by sticking ornaments upon an ugly building. This sort of thing has been tried, but always fails. The proper method is, not to stick things on, but to arrange the things that must be there, to study the proportion of openings and solids, to emphasise structural lines by the use of colour and relief; in a word, to articulate the structure so as to make it appeal to the sense of vision. This may be done both inside and outside the factory, and it requires only a thorough training on the study of architectural forms, and an expenditure that is but a fraction of the total cost.

Is the thing worth doing? It most certainly is, and for quite a number of reasons. In the first place, it has a great advertising value. Every picture of the factory that is published, whether in a newspaper, in the manufacturer's catalogue, or in an advertisement of any kind, produces some sort of an impression, good or bad. It is published with the idea of producing an impression, and certainly, from the standpoint of the owner's interest, this should be a good rather than a bad one. It is therefore worth his while to have such a building that the impression it produces is certain to be good.

The effect on the employees is still more important, because more inevitable. A manufacturer may never publish a picture of his plant, he may place it where travellers never see it in passing—although this would be an excellent source of free advertising thrown away—but he cannot keep his employees from seeing it, and being affected by its appearance. If men could be treated as machines a clean, hard, sanitary installation would be quite sufficient. But they cannot. One of the most important things about an employee is his mental attitude towards his work. And one of the ways to improve this attitude—and the only way, it is true, but nevertheless, a powerful one—is to make his environment agreeable.

The illustrations to this article show a typical example of the numerous factories and other commercial buildings erected on the Kahn system of reinforced concrete in the United States. They afford striking evidence that this system can express the best modern principles of construction and design.

[The foregoing article is quoted from the May issue of "Kahncrete," by kind permission of the proprietors.]

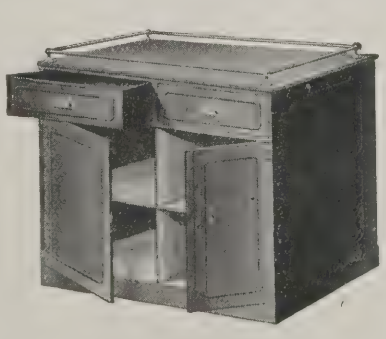
STEEL FURNITURE FOR WAR-TIME PURPOSES.

The phrase "steel furniture" is often used by manufacturers, but the full meaning of it is not yet grasped by the man in the street. Perhaps the phrase steel equipment, used by Americans, covers the ground more effectually. When one reads of steel furniture one's thoughts immediately turn to tables, chairs, wardrobes, wash-hand-stands, etc., and, although the majority of the public do not know it, these articles are all procurable made in steel.

The advantages of steel over wood for certain purposes are obvious. A well-made, well-finished, stove-enamelled piece of steel furniture is practically everlasting. It is fire-resisting, not affected by vermin, and is a decoration rather than otherwise to a well-furnished room.

Ships' Furniture.

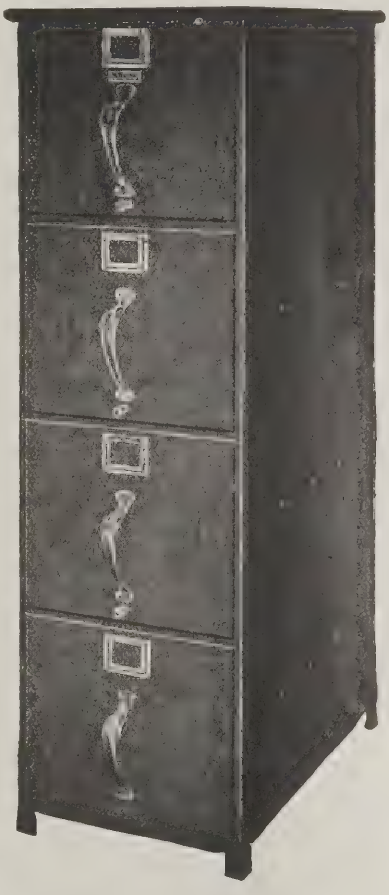
The time is fast approaching when wood furniture will be eliminated on ships, not only in the Navy but on big liners and merchantmen. For bunks, wardrobes, sideboards, tables, chairs etc., the advantages of steel are obvious, especially in warm climates, where the white ant does so much mischief.



SHIP SIDEBOARD.

Office Furniture.

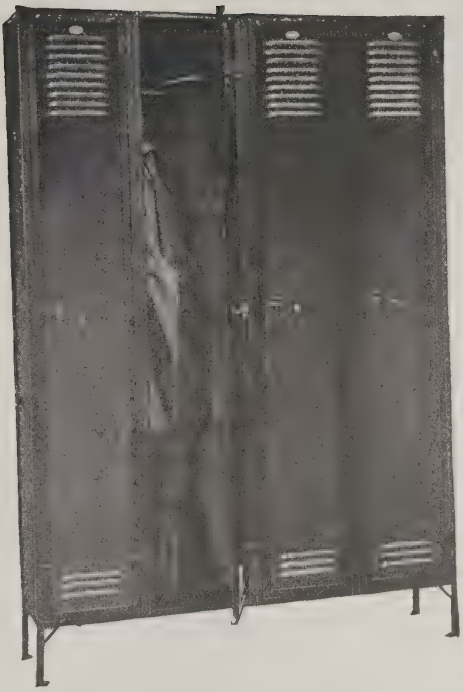
It is not generally realised that from the glazed-steel screen (the bottom part made of solid plate artistically panelled), with its easy-running sliding door hung on ball-race runners, to the waste-paper basket under the desk, every detail of office equipment can be made of steel. Desks, tables, filing and plan cabinets, card-index cases, pigeon-holes, bookcases, and cupboards with sliding doors, are all made of steel. Locker rooms, fitted with steel lockers, one for every member of the staff—for hanging clothes in, etc.—are now provided; each locker is fitted with a neat number plate and lock and key. Strong rooms are equipped with steel shelving, some adjustable, some with lock-up cupboards for special private papers—a part of the room divided off with an expanded metal screen, with lock-up door, separating the papers of one department from those of another. In fact, there is no limit to the use of steel in relation to office equipment.



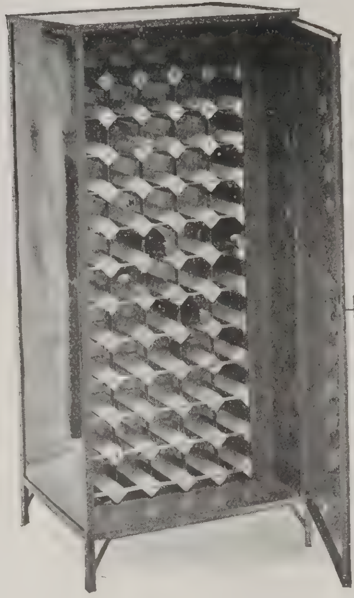
VERTICAL LETTER FILE.

Steel Furniture in Factories.

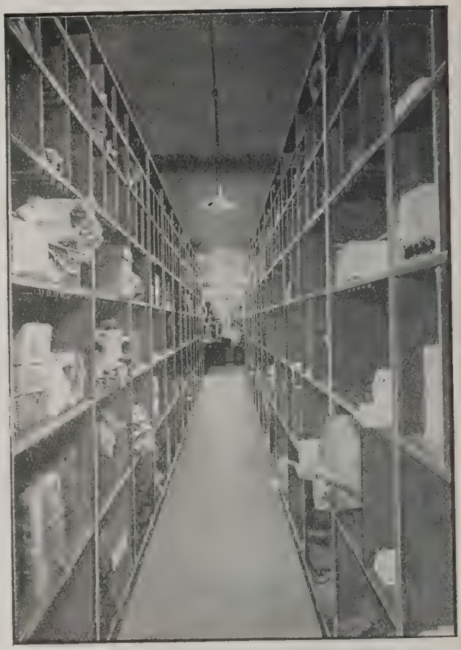
Manufacturers, engineers, explosive works, and factories on war work have learnt the real value of steel furniture. Numerous new munition works about the country have in most cases been built with a large floor area. This has necessitated some parts being divided off for stores, etc. Expanded metal screens, fitted into steel angle and tee framework, have made ideal partitions; and when arranged with sliding doors virtually no floor space is wasted. The foreman sits in an office



STANDARD LOCKER.

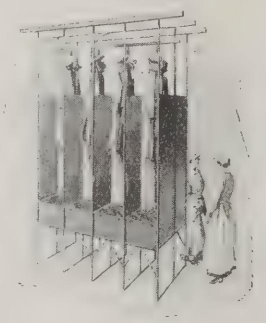


PORTABLE WINE SAFE.



STORAGE BINS.

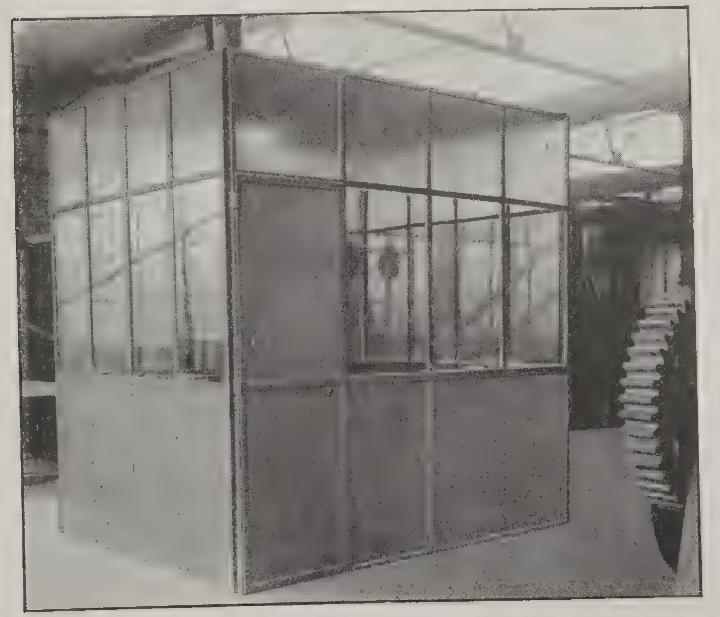
made of steel, the upper part glazed and with a solid plate roof, the interior equipped with a steel bench (the top covered with linoleum for drawing, the under part fitted with special lock-up drawers for special tools, etc.). From this office he can see all over the shop. It is quite easy to remove and, if necessity arises, can be taken to another part of the building in a very short time. In a walk around an up-to-date factory one may see all sorts of steel furniture, drawing cabinets, and cupboards. It is obviously of great advantage to keep such things as expensive machine drawings, working plans, and costly patterns in steel cabinets or drawers in preference to wood. There are solid plate, expanded metal, or wire-wove work guards around the machines; in the engine-room there are highly finished planished steel machine guards, with nickel-plated moulding; also of metal are the tool stands and cupboards, standing beside various machines; boxes and trays used for holding the partly finished articles as they go from one machine to another are made of steel, and they are taken finally into the stores on specially designed steel trucks. Steel stools and chairs are provided for the workers—some on legs, some to screw under or in front of the bench or machine, with a seat to swing out of the way. In the stores one may see all shapes and sizes of steel bins. The serving counter, the bar iron racks the cotton waste bins, the stillages for oi barrels, all are of steel.



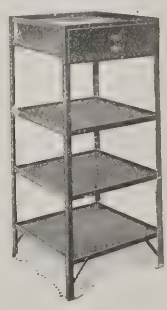
WOMEN'S WELFARE CLOAK-ROOM EQUIPMENT.

In the cloak-room various arrangement are used for keeping changes of clothes boots, etc. Some use solid plate stee lockers, sometimes with expanded meta doors; but perhaps the best arrangemen is the Women's Welfare cloakroom equipment; this consists of a light rail hung o a rod about 10 ft. from the floor. Th rail is unhooked from the rod, and th hat and coat are suspended on hooks at th top of the rail. This is again hooked o the rod. Twenty-four rails are locked a one movement by the charge-hand by very simple device. No one can reach th pockets of the coats because they are to high; and the clothes of one worker ar separated from those of another by a stee plate division. Hot-water pipes are ru at the bottom to dry and air the clothe not in use. Steel boot lockers are sometimes fitted into the same equipment.

In the Welfare Department of a moder

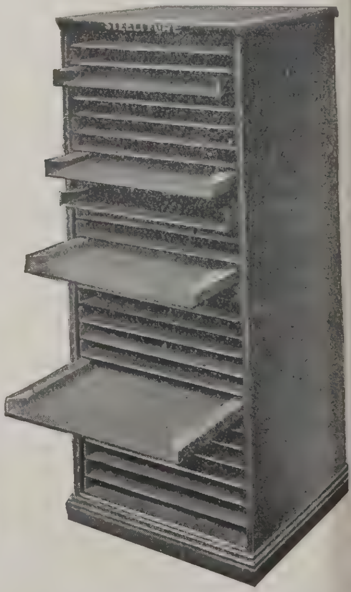


FOREMAN'S OFFICE.

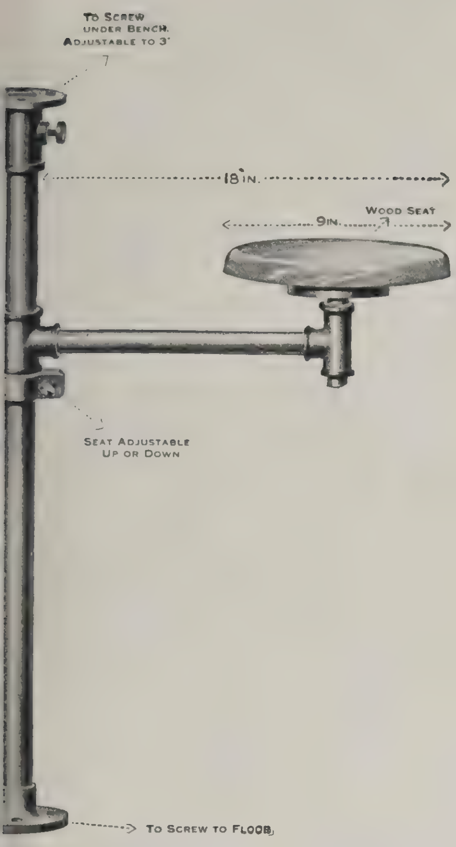


MECHANIC'S TOOL STAND.

STANDARD PLAN CABINET.



PRINTER'S TYPE CABINET.


To Screw under Bench. Adjustable to 3"
18 in.
Wood Seat
9 in.
Seat Adjustable Up or Down
To Screw to Floor

STOOL TO SWING UNDER BENCH.

actory a quantity of steel furniture is sed, such as canteens on wheels, soap-oxes, food store cupboards, etc., these in ddition to stools, chairs, and cloak-room quipment mentioned above. In odd orners one may find steel lockers, hold-ng cleaners' buckets, brooms, boxes; verything in its place, and the locker ccupying a negligible amount of space.

Steel Furniture in Hospitals.

White enamelled steel furniture is the deal equipment for hospital instrument ases, both fixed and on wheels. Cup-oards, chairs, nests-of-drawers, lockers or the staff and patients' clothes are all ade of steel. In institutions where leanliness and sanitation is absolutely ecessary steel is infinitely superior to ood. For smaller infectious hospitals ortable fumigating cupboards are made f steel.

Steel Furniture in the House.

Ordinary furniture has been already entioned, but several other articles are ade in steel for household use, such as ilver or electro-plate cupboards, cup-oards for the storage of jam or stock of roceries. Portable wine bins, to hold eventy-two bottles, are specially useful for lats or houses with no cellars. Boot cup-oards, cigar cabinets, and gramophone ecord cabinets are included. Every man as a few private papers to keep at home; teel boxes of all sizes are made for this urpose.

Printing Office Furniture.

Here again steel is used to great advan-age. A steel cabinet for holding steel ype trays can carry 100 per cent. more ype than a wooden one occupying the same oor space. Compositors' racks, tables, nd other furniture used in a printing ffice, all can be, and are being, made in teel. Now that female labour is so exten-ively employed in the printing offices it has been necessary to provide stools for the workers. A specially designed steel stool for operators feeding a machine is now made.

The foregoing account is fairly representative of what is being done in the manufacture of steel furniture. When war broke out the heads of the various departments of the War Office very soon grasped the advantage and importance of steel, and straight away commandered all steel furniture made, or partially made, for use in the various headquarters of the Expeditionary Force. In another case, where the Government commandeered a well-known building, the trustees insisted that only steel furniture should be installed; and now one may see hundreds of women working at steel tables, sitting on steel stools (with wooden seats), and using steel filing cabinets.

The Crittall Steel Furniture Company, Ltd., Braintree, Essex, are the manufacturers of all the articles of equipment shown in the accompanying illustrations.

The firm is well represented at the Welfare and Economy Exhibition, which is now being held in the unfinished London County Hall building, Lambeth. The exhibit is located in the Ministry of Munitions section, where a whole room is fitted up with steel furniture and equipment of all varieties and sizes, many of the objects illustrated in this article being on view. The exhibit is one of very considerable importance, and should be seen particularly by all who are interested in the problem of fire-prevention, which is largely solved by the introduction of steel furniture.

REBUILDING IN EAST LONDON.

In the House of Commons, on July 3,

Lord H. Cavendish-Bentinck asked the First Commissioner of Works if he would explain why his Department, in carrying into effect the repairs to the houses affected by the explosion in the East of London, had renewed floors over foundations of wet mud instead of concrete; and, seeing that this action on the part of his Department was calculated not only to endanger the health of the inhabitants, but to involve a waste of public money, would he say what action he now proposed to take?

Sir A. Mond: The object of the work undertaken by my Department on behalf of the Ministry of Munitions was the most rapid possible reinstatement of the damaged property, and that object was undoubtedly achieved. I made inquiries as to the possibility of compelling owners to contribute to the expense of effecting certain desirable alterations to their property, but the powers were limited, and it was not the duty of my Department to reconstruct or alter the character of private property at the public expense; concrete underfloors were therefore not put in in those houses where they did not exist before.

As regards the last part of the question, I deny the assumption that any action on the part of my Department has endangered the health of the occupants of the houses or has involved any waste of public money. I have personally visited the property on several occasions, and to my knowledge this property has been very materially improved in many respects.

Mr. W. Thorne: Had the borough surveyor of West Ham this under supervision?

Sir A. Mond: The local authorities were fully conversant with what was being done all through.

DEMOBILISATION AND HOUSING.

Under this heading the following letter appears in the "Spectator." It is signed "A. E. Stark":—

During recent weeks the President of the Local Government Board has been receiving deputations from various housing and other public authorities. So far as Press reports are a guide, nothing appears to have been said upon one aspect of this question which is, perhaps, the most important and urgent of them all. The county town with which the writer is most familiar has a population of about ten thousand. During the progress of the war young men have been continually leaving the town to join some section of His Majesty's Forces. In a considerable number of cases, possibly forty to fifty, these men have got married before going out to the front, and, almost without exception, no attempt has been made to set up a home—that was a job they could well leave until the war was over. If it is safe to assume that the same sort of thing has been going on all over the country, then it is clear that when the war is over, and the men return home, a very large number of cottages will be required if these young families are to be properly housed. The cottages will be required because they do not at present exist. To imagine these brave men as coming back to anything less than a comfortable cottage, where a healthy family life can be lived, is unthinkable. To permit it would be a national disgrace. The national interest, not less than the personal welfare of these young families, demands that adequate, and even generous, provision should be made to meet their case.

The general demand, however, is likely to be very great, and can only be met by wise forethought and prompt action on the part of the Government. It is to be feared the question may be postponed as long as possible, and then put into the hands of a few prominent organisations, which, while they obtain publicity, and claim to be experts on housing, are perhaps even greater experts at turning such opportunities to their own benefit and glorificaton. Should such a course be followed in the present case, it is likely to result in a double disaster, for while it would fail to provide the needed cottages, it would also deprive thousands of well-equipped builders in all parts of the country of just the opportunity which they need to re-establish their businesses after the disastrous years of the war. It should be remembered that no highly skilled industry in the country has been so hard hit by the war as has the building trade. A further unfortunate result might well follow if the wrong course be adopted. Thousands of these builders are looking to be able to reinstate their men as they come back after the war, while the men, no less, are hoping for, and even depending upon, this being done. It is a great opportunity if only it is rightly used. Is it too much to hope that the situation may be so well understood, and so wisely handled, that the largest number of cottages will be available to meet this urgent national need, and that not less assuredly it may be made to contribute substantially towards re-establishing one of our great national industries that has suffered grave injury during the period of the war? There is a fairly simple method by which these desirable results may be in large measure obtained, but at present there is nothing to indicate that the authorities have either recognised it, or have made any preparations to carry it into effect.

CHARING CROSS BRIDGE: DECISION OF LORDS' COMMITTEE.

When the scheme for strengthening Charing Cross Railway Bridge came before a Committee of the House of Lords, on July 3, the only opposition offered was that of the Royal Institute of British Architects and the London Society. The Bill has already passed through the House of Commons this session. Mr. Tempest, chief engineer to the South-Eastern and Chatham Railway, informed the Committee that the bridge was a source of anxiety, and its strengthening, at a cost of £167,000, should be carried out as soon as possible. The company had abandoned the powers already obtained for widening the bridge, but not those for the enlargement of Charing Cross Station. Sir Francis Dent, general manager of the railway, said that if a scheme were put before them for a larger improvement they would not raise objection to it on the ground of having spent £167,000.

Mr. Lloyd, K.C., for the opposition, asked that the work should be postponed for a period of two years after the declaration of peace. Many people objected to the existence of the bridge at all, he said, and most people agreed that it was a distinct eyesore. The petitioners desired that a fair opportunity should be allowed for the development of a scheme to provide for the removal of Charing Cross Station to the south side of the river, and the construction of a handsome road bridge, with appropriate approaches. If the Bill were passed in its present form it would unquestionably prejudice that great public improvement.

Sir Aston Webb, the Earl of Plymouth, Lord Ribblesdale, and Mr. John Burns gave evidence in support of the petition. Mr. Burns said that when the Channel Tunnel was constructed—and he believed that was now inevitable—the traffic of a reorganised South-Eastern Railway would probably be doubled or trebled. Charing Cross Station and bridge would then be miserably inadequate.

Announcing the decision of the Committee, the Chairman said they would allow the Bill to proceed, upon the promoters giving an undertaking that no expenditure in relation to Charing Cross Station, other than that required for repairing and strengthening the bridge, should be incurred by the company. The committee had decided that, in the event of any public improvement being authorised, involving the removal of the existing station and bridge within fifteen years, the railway company should not be reimbursed for their expenditure on the strengthening of the bridge. The Committee also required that the company should not commence construction on the works above water until the expiration of three years from the passing of the Bill, unless the Board of Trade, in the public interest, should require the work to proceed earlier.

The Select Committee of the House of Lords had again, on July 4, the Charing Cross Bridge Bill before them, Lord Kintore presiding. Mr. Clode K.C., for the promoters, said a difficulty had arisen in respect of one of the heads of the decision of the Committee. The difficulty was in the provision that the company should not expend more than the £167,000 necessary for strengthening the bridge. In the other House they had given the London County Council a pledge that they would proceed with the widening, and this would involve an expenditure largely in excess of the £167,000. He submitted a plan showing how it was proposed to use part of the station forecourt.

The Chairman: We will not allow any widening. We are no parties to any bargain you may have made with the London County Council.

After an adjournment Mr. Clode pointed out that the decision of the Committee that in the event of any public improvement being authorised involving the removal of the existing station and bridge within fifteen years the company should not be reimbursed for their expenditure on the strengthening of the bridge raised an additional difficulty, for it related only to the promotion of a Bill. The effect might possibly be that a Bill might be promoted but the resulting Act not be carried into effect. It was a very difficult position for a company to be placed in, having this indefinitely hanging over their heads.

The Chairman intimated that there might be a provision that the promoters of such a Bill must give notice to treat within a year. Clauses which satisfied the parties in view of the decision of the Committee were agreed upon, and the Bill was passed.

CONFERENCE OF IRISH QUARRY OWNERS.

A conference of Irish quarry owners and their representatives was held at the offices of the Dublin I.D.A., Dawson Street, to consider how the use of Irish stone may be furthered, particularly in the rebuilding of Dublin.

Major Crean, who presided, said the question had become so serious of late they had sought the assistance of the Institute of Architects of Ireland, and they had formed a joint committee, which had done considerable work in approaching building owners and the Lord Mayor. The Lord Mayor was in thorough sympathy with rebuilding O'Connell Street with stone—if not wholly, at least the dominant features of it. Major Crean added that, apart from stone required in the building of the destroyed areas and throughout the country generally, there is an immediate prospect of large demands from the Continent. Already inquiries from Belgium for stone are afoot, and if the present situation is carefully handled by the quarry owners of Ireland their industry will benefit to an unprecedented extent.

Mr. P. J. Lynch, Institute of Architects, said machinery was the great thing needed to enable the quarries to compete with others. Lord Monteagle said the great difficulty was the uncertainty of the demand, and the consequent uncertainty of the labour supply.

Mr. Aherne (Ross Quarry, Cavan) believed that the people wanted O'Connell Street built of stone. Mr. T. Slevin (builder) suggested the establishment of a central depôt in Dublin where stone could be polished, instead of sending it across to England. Mr. Montague (London) said that England imported every year 33,000 tons of marble, only 5,000 tons of which came from Ireland. The reason was that it could not be got at the times it was required, though the material was equal to any from Italy and Greece. £30,000 or £40,000 worth of machinery was to be installed in Kilkenny quarries immediately after the war. In a few years they would create a tremendous demand.

A committee was formed to regulate all questions affecting quarry owners, with Mr. M. Geoghegan as hon. secretary.

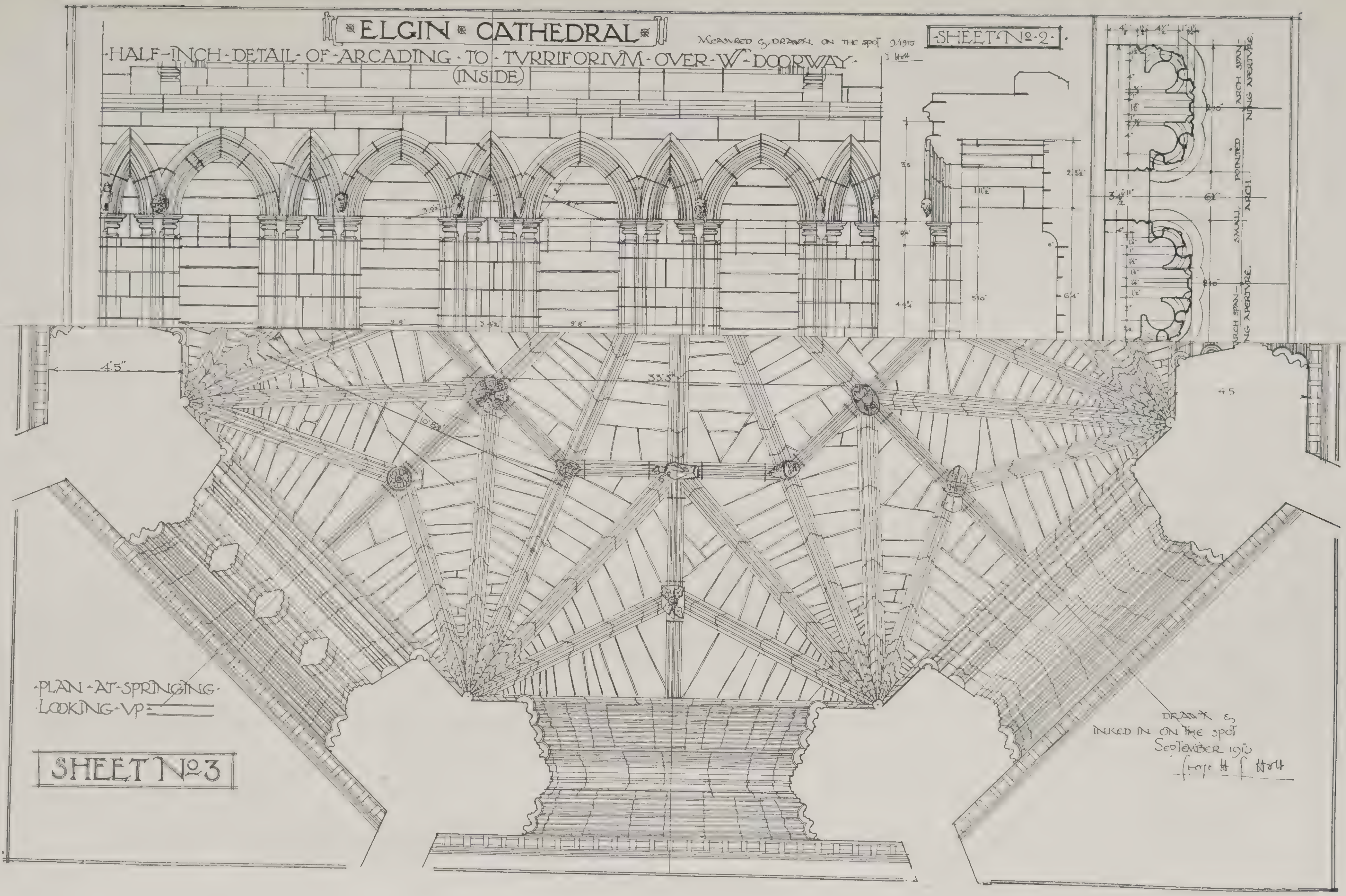
THE TRAINING OF PLUMBERS.

At the annual meeting of registered plumbers in Glasgow and the West o Scotland, held in the Royal Technica College, Glasgow, ex-Bailie Willia Maclure occupied the chair, and move the adoption of the Council's report Details were given of the plumbing classe conducted in the Royal Technical College in which the Council had always taken warm interest. Owing to the war, th number of enrolments was last sessio much below the normal, it being com puted that over 150 plumbing students ar serving in His Majesty's Forces. Th Council in November last visited the work shops of the Water Department in Sydne Street. In December an important lec ture, with discussion following, was give by Mr. William Jones on "Public Healt Development." The Chairman mad reference to the problems facing th plumbing trade after the war, and the ex treme importance to the country, in vie of the housing question, of maintainin the efficiency of craftsmanship and th adequacy of the supply of plumbers' wor of high standard. The whole question o apprenticeship would also call for carefu consideration. As the trade had bee severely depleted by the military necess ties of the country it was noted with sati faction that in the new list of certifie occupations plumbers aged not less tha thirty-one on April 4, 1916, had at lengt been included.

A BROAD VIEW OF TOWN-PLANNING.

City-planning is, says a "Times reviewer, an attempt to produce the fine and most efficient cities, peopled by t best and happiest citizens, that our mode industrial life will allow. We do n agree that city-planning is a purely eng neering problem. We feel that ma problems outside engineering are involve and that just as the architect controls t design and co-ordinates the work of t different trade specialists under him, so is necessary to have a trained city-plann capable of co-ordinating the work of t civil engineer, the social science expe the architect, and the park engineer— man with a mind not obsessed by the pet details of any one of these differe branches, but having the broad grasp the main principles of all, and so able combine them into one harmonious whol City engineers have notoriously failed this broad outlook; they have been mo concerned with the surface of a street th with its direction; more occupied with t durability of a structure than with general appearance. We still need all t details well carried out, but we want the to adorn something worthy of the time a trouble they entail.

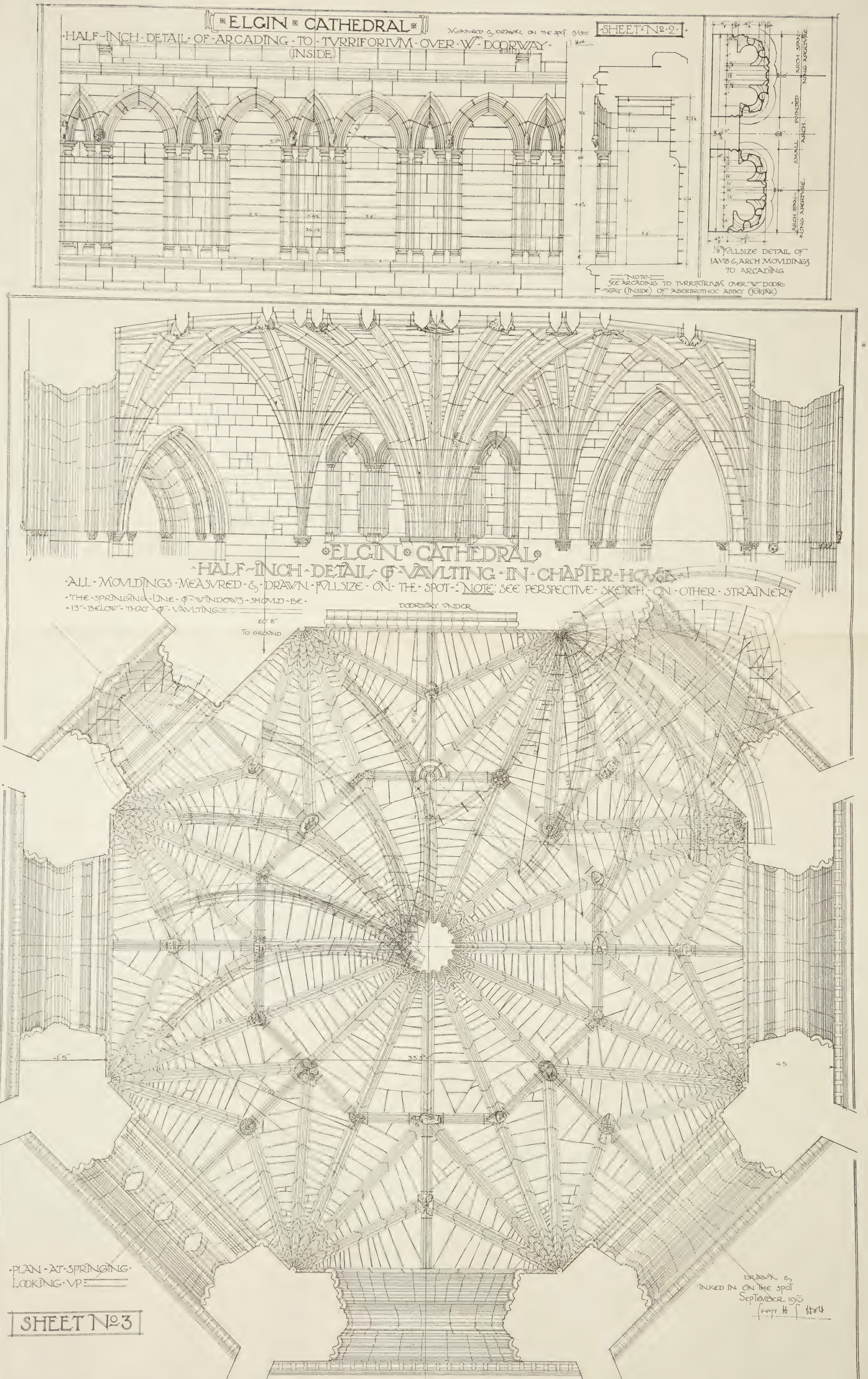
The architect is also inclined to think t much of spectacular effect and too lit of the necessary traffic problems, whilst t social reformer would confine all his atte tion to the slum districts and better ho ing. But not one of these by itself cou make the city that "community of we being" which it should be. Dublin, f instance, with the houses once occupied its wealthy citizens now let out in sin rooms and turned to slums, shows t good building is not enough. Good bui ing, sound finance, efficient engineeri and a well-directed effort towards soc betterment are all necessary to produce well-balanced plan of growth.


ELGIN CATHEDRAL
HALF-INCH-DETAIL-OF-ARCADING-TO-TVRRIFORIVM-OVER-W-DOORWAY-
(INSIDE)
Measured & drawn on the spot 9/1915
SHEET No 2
SMALL POINTED ARCH
ARCH SPANNING APERTURE
4'5"
33'3"
45
PLAN-AT-SPRINGING-
LOOKING-VP
SHEET No 3
Drawn & inked in on the spot September 1915
George H G Holt

STUDENTS' DRAWINGS (SERIES II.). L.—ELGIN CATHEDRAL: DETAILS OF VAULTING TO THE CHAPTER HOUSE. ETC.

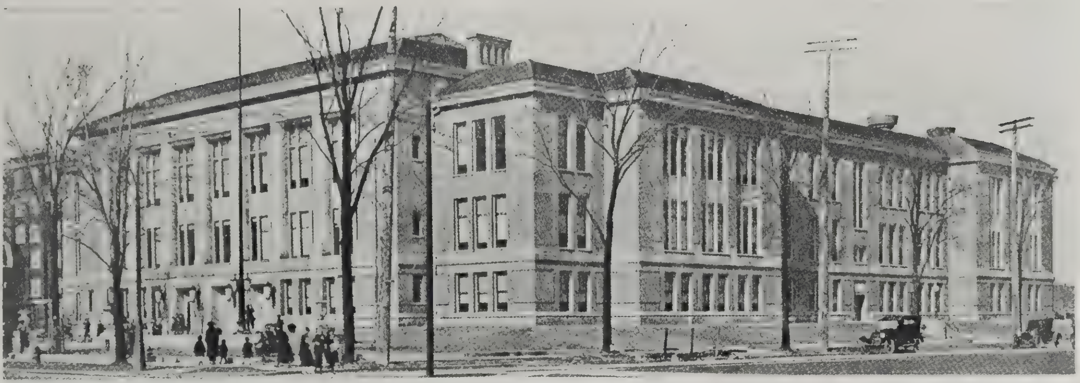
BY GEORGE H. G. HOLT.

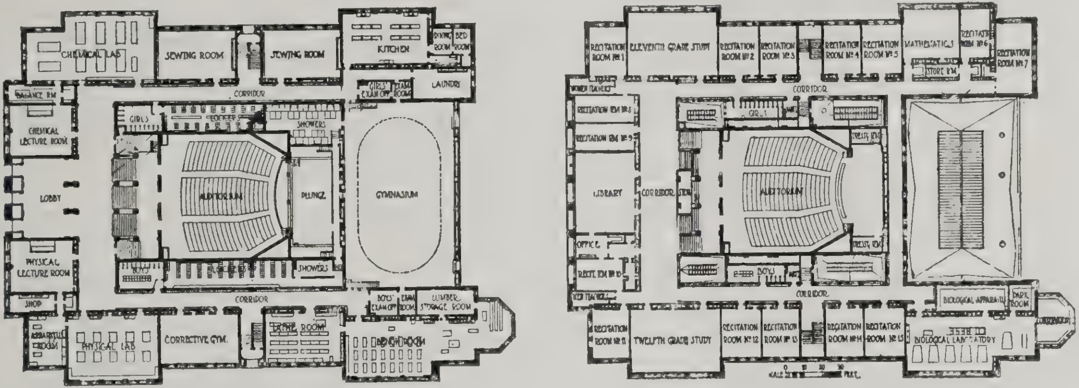
Supplement to "The Architects' and Builders' Journal," Wednesday, July 11, 1917.


ELGIN CATHEDRAL
HALF-INCH DETAIL OF ARCADING TO TURRIFORIUM OVER W DOORWAY (INSIDE)
MEASURED & DRAWN ON THE SPOT 9/1915 J Holt
SHEET No 2
1/8th FULLSIZE DETAIL OF JAMB & ARCH MOULDINGS TO ARCADING
ARCH SPANNING APERTURE
SMALL POINTED ARCH
NOTE
SEE ARCADING TO TURRIFORIUM OVER W DOORWAY (INSIDE) OF ABERBROTHOC ABBEY (FORFAR)
ELGIN CATHEDRAL
HALF-INCH DETAIL OF VAULTING IN CHAPTER HOUSE
ALL MOULDINGS MEASURED & DRAWN FULLSIZE ON THE SPOT NOTE: SEE PERSPECTIVE SKETCH ON OTHER STRAINER
THE SPRINGING LINE OF WINDOWS SHOULD BE 13" BELOW THAT OF VAULTING
DOORWAY UNDER
20' 8" TO GROUND
PLAN AT SPRINGING LOOKING UP
SHEET No 3
DRAWN & INKED IN ON THE SPOT SEPTEMBER 1915
George H. G. Holt

STUDENTS' DRAWINGS (SERIES II.). L.—ELGIN CATHEDRAL: DETAILS OF VAULTING TO THE CHAPTER HOUSE, ETC.

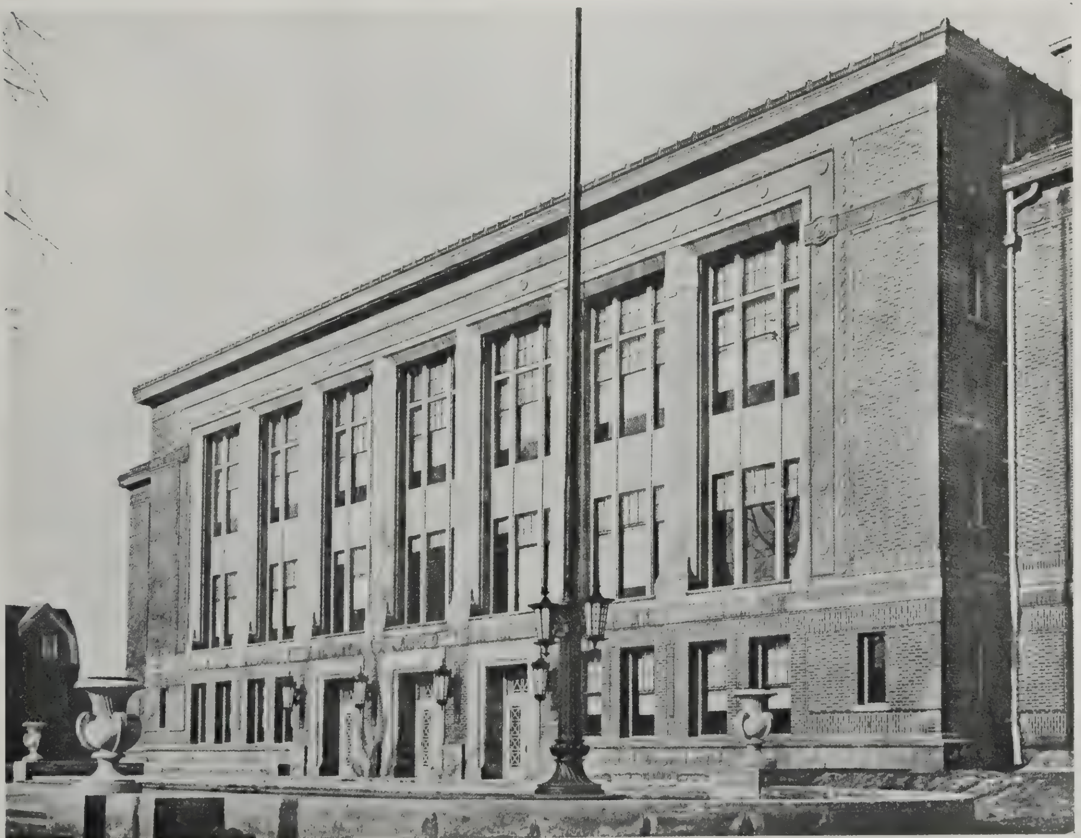
BY GEORGE H. G. HOLT.





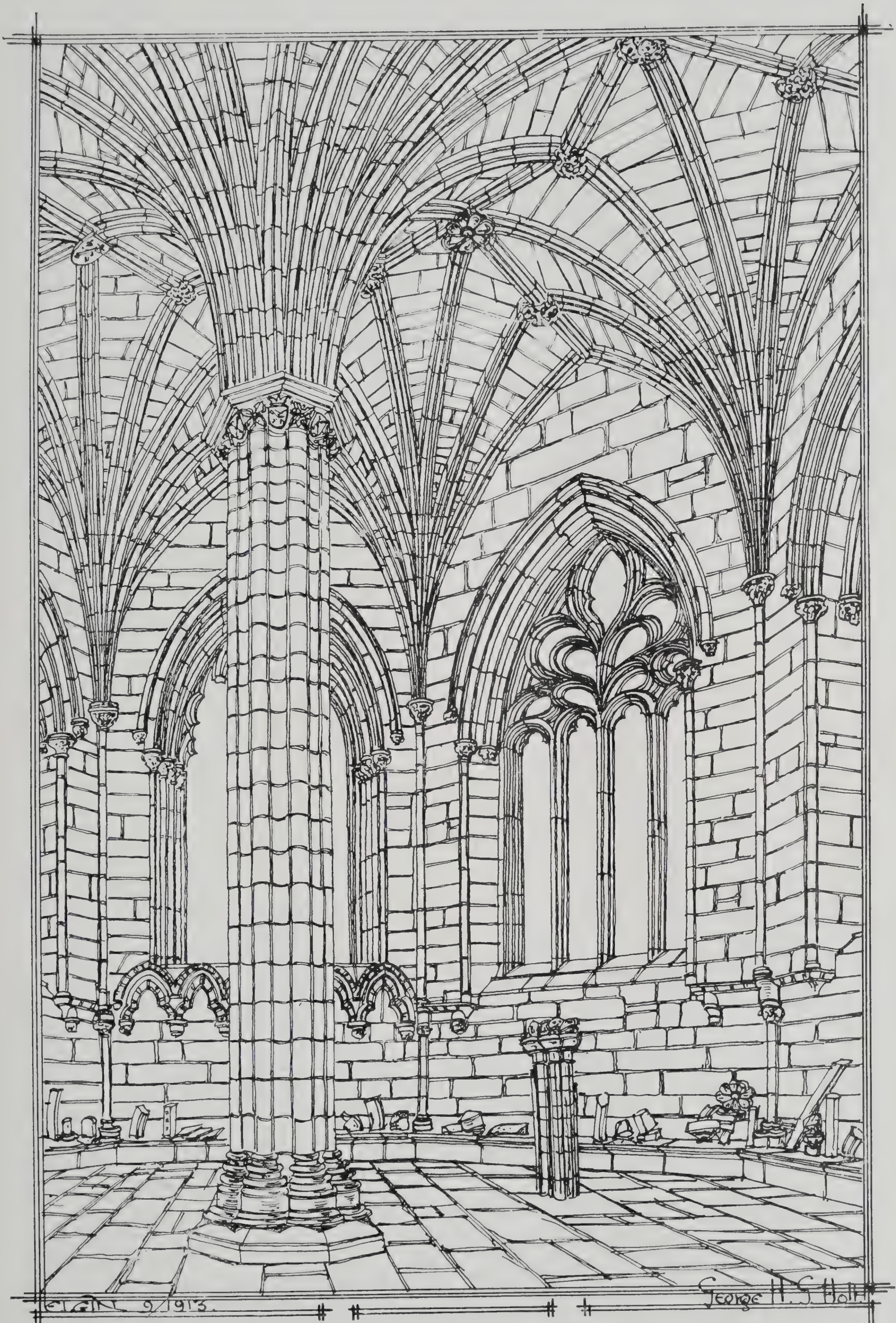
FIRST FLOOR PLAN

SECOND FLOOR PLAN



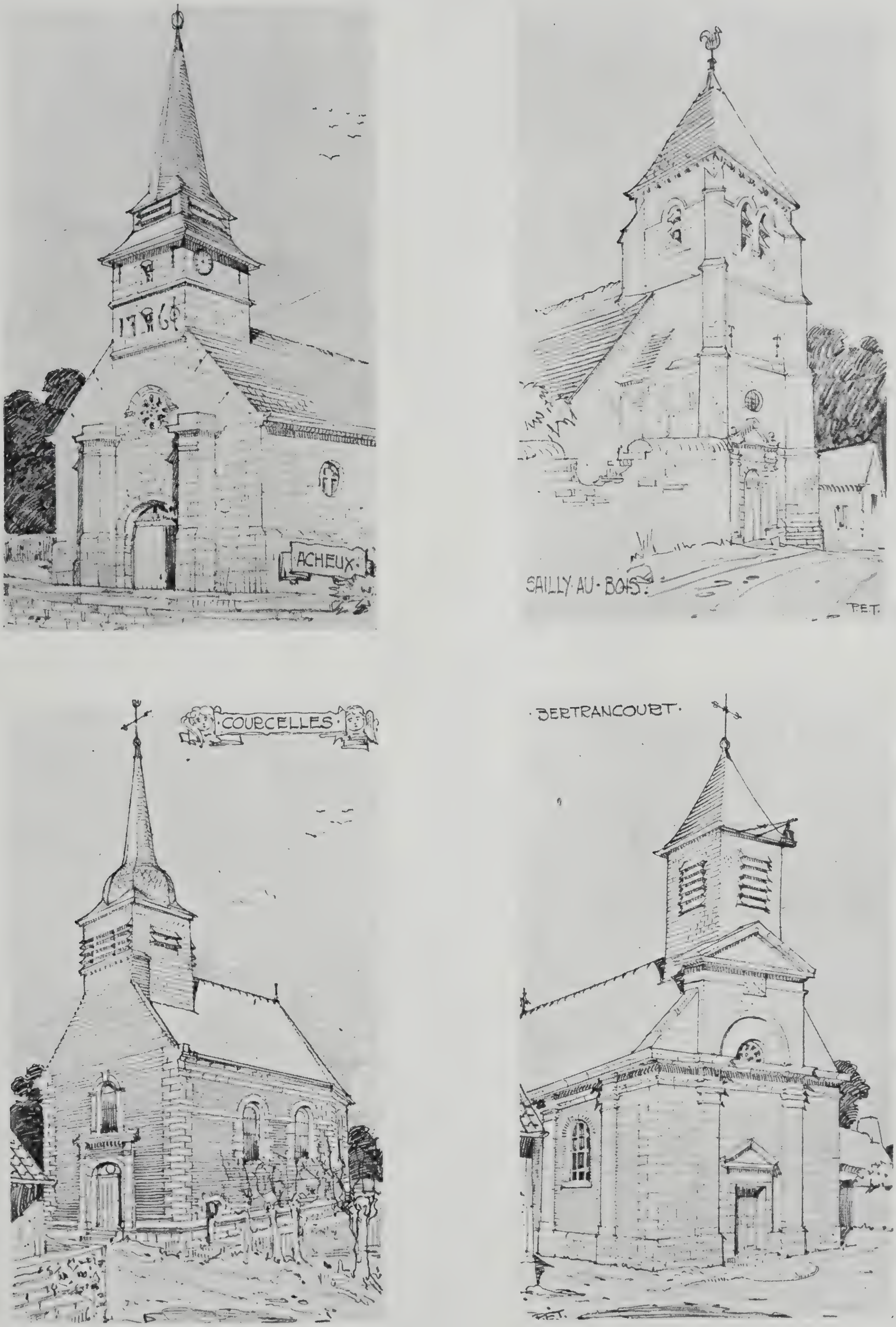
MODERN AMERICAN ARCHITECTURE (SERIES II.). XXXIV.—NORTHERN HIGH SCHOOL, DETROIT, MICH.

MALCOLMSON AND HIGGINBOTHAM, ARCHITECTS.



ARCHITECTURAL DRAWINGS AND SKETCHES. IV.—ELGIN CATHEDRAL: SKETCH OF CHAPTER HOUSE.

BY GEORGE H. G. HOLT.



ARCHITECTURAL DRAWINGS AND SKETCHES. V.—SOME VILLAGE CHURCHES IN FRANCE.

BY PERCY E. THOMAS.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

JULY 18, 1917. *TOTHILL STREET, WESTMINSTER.* VOLUME 46. No. 1176.

IT is a pity that Government, royal, and ambassadorial buildings are superior to the laws and by-laws. This immunity is a survival of feudal times, and that is one fairly strong reason for getting rid of it. There are other reasons. For example, when a very lamentable case of typhoid impelled an examination of the drainage arrangements of certain royal palaces, it was found that they were in a condition that would not have been allowed in dwellings subject to the attention of the sanitary inspector. Again, a certain large place of public assembly enjoys the royal prerogative of independence of the by-laws with regard to means of escape from fire. And now Mrs. Lloyd George has revealed a dark secret of Downing Street. Presiding at a lecture at the National Economy Exhibition last week, Mrs. Lloyd George said: "When we went to 11, Downing Street, nine years ago, we found a big scullery there, with not a window, not a gleam of light, nor ventilation of any kind. It took me some little time before I could persuade the Board of Works to build me a nice little scullery. I did not rest till I got it. Now there is a nice little complete scullery, with a glass roof, and a window which opens out into the garden. Perhaps you would not believe me if I told you that when Mr. Asquith came to 10, Downing Street, nine years ago, there was not a single bathroom in the place. That is enough about Downing Street—I think it has improved a little since we have been there."

* * * *

It is difficult to associate Downing Street with "all the comforts of home." Pitt and Lord Grey made it a dwelling; Lord Melbourne and Sir Robert Peel used it as an office; and now Mrs. Lloyd George has made it a home; and, if newspaper gossip can be trusted, Mr. Harry Lauder has sung his simple songs at the Prime Minister's fireside; but that was before the war, when Mr. Lauder went to enlist the sympathy of Mr. Lloyd George with the hard case of the pit ponies. The scene would make a subject for a more interesting picture than that which B. R. Haydon painted of Lord Grey "pondering by his fireside after one of the great debates on the Reform Bill." Another picture concerning Downing Street, but No. 14, not No. 10, represents the accidental and only meeting of Nelson and Wellington. Each had business at the Colonial Office, where they happened to come face to face. Wellington recognised Nelson by recollecting his portraits. Nelson did not know the Duke, but was so struck with his conversation that he went out of the room to ask who he was. When, in due course, a lady Prime Minister is installed in Downing Street, she should be grateful to Mrs. Lloyd George for initiating important domestic reforms.

* * * *

Public bodies whose tenure of office is protracted are apt to grow stale, flat, and unprofitable. This fate seems to have overtaken the London County Council, upon whose building and real estate operations, to say nothing of their reactionary tramway policy (which, however, is a related subject) a strict watch should be kept. In the debate on the annual estimates of the Housing of the Working Classes Committee, Mr. J. D. Gilbert found occasion to express his disappointment that more progress had not been made with the Tabard Street area. Old property, he alleged, had been re-let in an insanitary condition, and he added that "the block of buildings erected was one of the ugliest he had ever seen." As we have not seen this block, we can neither affirm nor deny Mr. Gilbert's assertion, which is nevertheless a disquieting gloss on the Council's decision to avoid all decorative effect in the new type of school they have adopted, on their general slackening in educational endeavour, and on their pusillanimous policy with respect to Charing Cross Bridge. Altogether, it would seem that they are not performing their functions as well as they can, but as badly as they dare, and that they are in no small danger of being justly classed among those who are seizing upon the war as a convenient pretext for meanness that can be for the moment exercised with impunity, but that in normal times would not be tolerated, nor even attempted. With any question of polemics that may happen to be involved in these matters we have no concern whatever, but we are very jealous for the preservation of London from the ill-effects of a lessened sense of responsibility that is apparently demoralising its rulers. It is not merely that they have grown lethargic and unenterprising, and are not moving forward. They seem to be gradually and stealthily, but with growing speed, slipping down the steep slope of Avernus. It is in all friendliness that they are reminded of the parlous state of the backslider.

* * * *

Among the many suggestions for the protection of life during air-raids, there is none that seems to offer an effective solution of the problem. Short of erecting bomb-proof shelters, there seems to be no means of safety. To seek it in the basement is the course most generally recommended; but during a recent raid a bomb went through three stout floors. That the building was not demolished was because of its modern construction. Other instances in former raids prove conclusively that reinforced concrete comes out of the ordeal with high credit. On the other hand, brickwork buildings are commonly disintegrated by a direct hit, and occupants who might have escaped from the bomb are injured by the collapse of the building. There is some evidence that raiders now release simultaneously two bombs, the one explosive, and the other incendiary. Here, again, reinforced-concrete construction has well maintained its reputation for fire-resistance. This clear indication of anti-air-raid materials, however, is satisfactory in only a very limited sense. It is on the possibility of using them to the utmost advantage that architects must set their wits to work. Having lost our insularity, we must in future build accordingly. At least the more important buildings in our great towns will have to be designed with a view to contingencies which formerly seemed so remote as to be completely negligible, but are now a matter of actual experience. Not that we lacked foresight, but that it seemed to us absolutely incredible that any nation believed to be civilised could become so diabolically depraved as to drop bombs on a civil population. Disillusionment must be promptly succeeded by energetic action.

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Provision for safety is a matter on which an advisory board of experts should be consulted. A correspondent of the "Westminster Gazette" writes: "With all the experience derived from scores of instances of damage to public buildings and private houses, I feel sure it would be generally appreciated if, for example, representatives of the Surveyors' Departments of the City Corporation and the London County Council were to formulate a series of recommendations in respect of each class of building, and see that they were brought to the notice of every occupier by advertisement or otherwise." That would be a good temporary measure, but it should not prevent the immediate formation of an advisory council or committee of safety to include architects and engineers who are free from official ties, and are therefore the more likely to put forward fresh ideas and express independent opinions. There is, of course, a two-fold object in view—to devise means that can be at once adopted, and measures that will require time for elaboration, and will therefore mainly affect the building construction of the immediate future. A small point is that, if sandbags remain the chief resource, roofs of the right shape and of sufficient strength to carry them will take the place of the prevailing type, which might be constructed of brown paper (or paper of any other colour) for all the resistance they offer to bombs and shrapnel.

* * * *

Most of the actors and actresses who last week attended the memorial service to Sir Herbert Tree at St. Martin's-in-the-Fields must have remembered that Nell Gwynne was buried there. Fewer would recollect, without some reminder of the fact, that Gibbs's fine church holds also the mortal remains of Roubiliac the sculptor, and of Farquhar the dramatist. Roubiliac, it will be recalled, made a statue of Shakespeare for David Garrick. It is said that Henry VIII. built a church on this site because he disliked to see funeral processions passing through Whitehall; but it is probable that there was a church there in the twelfth century. James Gibbs made here an essay in acoustics by designing an elliptical ceiling which he defended as being "much better for the voice than the semicircular, though not so beautiful. It is divided into panels, enriched with fretwork by Signors Artari and Bagutti, the best fretworkers," he says, "that ever came to England." Contemporary critics do not always recognise the beauty of a new building, especially if, as in this case, it is invested with a touch of genius; for then it presents features that are new and strange, and the beholder is not quite sure whether he may dare to like them—he has vague misgivings that they may be "incorrect," and that any expression of the pleasure in them he may feel will perhaps involve him in a charge of bad taste. Moreover, before the reputation of a building, or of its architect, has been established, the person who supposes it to be a mark of superiority to criticise adversely can find fault without having authoritative verdicts quoted against him. Mr. Ralph, however, writing not very long after the church was finished, expressed keen admiration for it. "I could wish that a view was opened from the Mews to St. Martin's Church. I do not know any of the modern buildings about town which better deserves such an advantage." This pious wish has been realised, but Ralph could not have lived long enough to see its fulfilment.

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Another early critic of St. Martin's complains that "the absurd rustication of the windows, and the heavy sills and trusses under them are unpardonable blemishes, and very improperly introduced into this composition of the Corinthian order, as it takes away the delicacy which should be preserved in this kind of building." That was written in the days when, to be called "elegant," everything had to be attenuated to the last degree. Massiveness was regarded as vulgar, and Gibbs, in his recoil from this fallacy, may occasionally have gone a shade too far in the other direction. For example, his decorative details in the famous "cube-room" at Sudbrook, of which we illustrate this week, in one of our plates, a detail of the chimneypiece, are perhaps a little too bold, and almost suggest deliberate defiance of the current craze for thin effects which afterwards reached its acme in the anæmic grace of Chippendale, or perhaps in the fastidious refinement of Thomas Hope, from which the cult of clumsiness that distinguished the period immediately succeeding him was possibly a violent reaction. It is true that the sills at St. Martin's look rather thick and clumsy if you segregate each as a separate entity, and that the "trusses" under them, taken severally, are rather squat and dumpy, but taken in a *coup d'œil* of the church they are not obtrusive, but contribute to an appearance of strength. As to the alleged "rustications" (a most confusing term—these are plain stone tablets set at intervals round the windows, with "blocked column," or "bolt-and-nut" effect), they are so numerous as to grow wearisome: yet somehow we could not wish them away.

* * * *

Fergusson, in finding fault with Gibbs for adopting "the usual objectionable feature of an entablature over each column before receiving the arch," makes an excruciating suggestion for improvement. It is a fault, he says, frequently seen in Spain, in Italy in the worst days of her art, and very rarely in France; "but wherever it is introduced it is fatal." He should have stopped there; but, to his undoing he must needs go on: "Had the architects only had the sense to turn the fragment topsy-turvy, it would then have been constructively correct. It would, in fact, have become [one observes that Fergusson's English composition was not always "structurally" correct] the Moorish horseshoe arch, and with a very slight modification of detail might have lost much of its offensive character, while it would have ranged as well with anything on the wall." He gives a diagram to demonstrate how much better the entablature would look if placed upside down, and naturally the effect is blood-curdling. One is rather disposed to agree with Fergusson as to the defect, but the remedy he suggests is revolting.

* * * *

On Saturday last the composition of the employers' section of the Building Trades Central Advisory Committee to the Minister of Labour was officially announced. A committee representing the workers was formed some months ago, and has already held several sittings. The employers' committee held its first meeting on the Tuesday preceding the date of the official announcement of its existence, and immediately got to work with great energy. Mr. J. Storrs, president of the National Federation of Building Trades Employers, was elected chairman, and Mr. F. L. Dove, a prominent member of the London County Council and of the National Federation, was chosen as vice-chairman. Of the twelve members of the committee, nearly all are men well known for their active participation in the work of building trades organisations of employers, and all may be assumed to possess full knowledge and ripe experience of the conditions on which they are to advise the Minister of Labour. It is no doubt because most of these gentlemen must often have met in previous consultations on the affairs of their respective organisations, and knew each other's minds, that they were able at once to bring up for discussion a most important proposal—that of setting up a central building trades exchange for the London area, with the primary object of avoiding delay in placing men through the labour exchanges. Details are not yet forthcoming, but the mere suggestion is full of promise—not merely of convenience for the building trades, but of consequent relief of the congestion and inefficiency of the Labour Exchanges consequent on the mixed medley of interests with which at present they have to deal.

HERE AND THERE.

It may possibly be an exaggeration to say that, in the restoration of houses destroyed in the East End explosion, floorboards were laid over "wet mud." But the allegation has been frequently made, and, so far as I have seen, has never been contradicted. Lord H. Cavendish-Bentinck made it in his question in the House of Commons, and the First Commissioner of Works did not deny it. Some few weeks back, in supporting the proposal for a Ministry of Health, I remarked that one of the chief duties of the Ministry would be to trace disease to its source. This adventure in the East End should put the new Ministry on a hot scent. A varied assortment of diseases must surely come from houses built upon damp foundations, and the archives of H.M. Office of Works could probably supply the addresses of several such houses upon which a beginning could be made. Thus may one Department materially assist another.

* * * *

It is a commonplace of medical knowledge that dampness is the enemy of health. Not only does it register direct hits by setting up rheums, catarrhs, and "diseases of the chest and respiratory organs," but, by lowering the general vitality, and favouring inflammatory conditions, it predisposes poor humanity to almost every disease that flesh is heir to. Someone has said that house-dwelling is at best an unhealthy habit. But as Thoreau says, "Man was not made so large-limbed and robust but that he must seek to narrow his world, and wall in a space such as fitted him. He was at first bare and out of doors; but though this was pleasant enough in serene and warm weather, by daylight, the rainy season, and the winter, to say nothing of the torrid sun, would perhaps have nipped his race in the bud if he had not made haste to clothe himself with the shelter of a house." Even a bower, a tent, or a cave, or Diogenes his tub, would make man less hardy, and more susceptible to the disease germs which it would accumulate or "harbour," a word that seems to have become delicate if not diseased; for it meant originally, so the dictionary tells me, shelter for an army (*here* = army; *beorg* = shelter), and is now reduced to mean, as a transitive verb, "give shelter to (especially vermin), criminal, evil thoughts"—what a falling-off is there!

* * * *

Neolithic man was perhaps the first sanitarian. Your tent-dweller could move his shelter away from the chief causes of offence, but presumably the cave-dweller would cut a channel in his floor to form a sort of drain, and knock a hole through the outer wall, or through the roof, if not to let in light and air, then to give him a peephole through which to watch for the approach of his prey or of his enemy. He was thus also a pioneer of trench warfare. Not until the Romans built their villas in this country and elaborated their hypocaust tiles into decorative paving, did our rude forefathers have any idea of making a decent floor; and they do not seem to have profited much by Roman example. Mediæval buildings—like Roslin Castle, for instance—show how primitive were their notions with respect to floors, which were simply rough-hewn out of the rock, or paved with cobbles, or were of trampled mother earth. It would be possible to find, even at the present day, many earthen floors made of rammed loam. Below is an illuminating extract from Nicholson's dictionary for architects and builders—a work that I rather value because it stands midway between ancient and modern practice—it is a "two-headed Janus" glancing a long way backward and a little way forward. The extract deserves a paragraph to itself.

"Earthen floors for plain country habitations may be made as follows: Take two-thirds lime and one of coal-ashes, well sifted, with a small quantity of loam clay: mix the whole together, and temper it well with water, making it up into a heap: let it lie a week or ten days, and then temper it again. After this, heap it up for three or four days, and repeat the tempering very high, till it becomes smooth, yielding, tough and gluey. The ground being levelled, lay the floor with this material about two and a half or three inches thick, smoothing it with a trowel: the hotter the season, the better; and when it is thoroughly dried, it will make a good floor for houses, especially malt-houses. But should it be required to make the floor look better, take lime made of rag-stone, well tempered with whites of eggs, and cover the floor about half an inch thick with it, before the under-flooring is quite dry. If this be well done, and thoroughly dried, it will appear, when rubbed with a little oil, as transparent as metal or glass. In elegant houses, floors of this nature are made of stucco, or plaster-of-Paris, beaten and sifted, and mixed with other ingredients." In those days, Patience and Leisure met together and kissed each other. Together they got in the way of the steam-engine. It was a sad accident.

* * * *

If this should meet the eye of the Food Controller, he may like to be assured that the recipe is retrospective. When eggs were plentiful and cheap, what a messy business that well-tempering with whites of eggs must have been. Nor is the word "transparent" the transcriber's blunder for "translucent." Steel may be transparent under the X-rays, but not otherwise. Possibly the recipe will be useful not for imitation, but as explaining the composition of old floors of which the smoothness might otherwise be inexplicable, and would perhaps be erroneously attributed to plaster-of-Paris; which, indeed, was a favourite material for flooring in the days of Elizabeth and long after. Boarding was a sorry substitute, because it excluded neither dampness nor ground-air; and one may hazard a guess that the general use of boards over damp earth coincided with a vast increase in the occurrence of diseases of the throat and chest. About ground-air our forefathers did not worry much. They had a dim idea that exhalations from the earth were unwholesome, but they knew not why. It was left for Boussingault and Lewy to discover in 1853, that the air permeating the soil is very rich in carbonic acid, derived from decomposing organic matter—that obviously it is inimical to life and health, and should be by all means excluded from the dwelling.

* * * *

A leaking drain-pipe may infect the soil for a considerable distance, and thus sewer-gas may be drawn up through the floor by the warm air inside a house, where the fires and chimneys cause an upward draught which may extract from the polluted soil the germs of zymotic disease. Coal-gas from a leaking main is similarly attracted; and there is on record at least one case in which the inmates of a house to which gas was not laid on were asphyxiated by an escape from the main. Hence the wisdom of providing—as, for example, in the by-laws of the London County Council—that the site of every house or building shall be covered with a layer of good concrete, at least six inches thick, and smoothed on its upper surface. It is a provision against even worse things than dampness, and that it should have been in any instance omitted in the East End rebuilding is in the highest degree deplorable.

DIOGENES.

LONDON BRIDGES: THEIR HISTORY AND ARCHITECTURE.*

BY W. D. CAROË, M.A., F.S.A., F.R.I.B.A.

BRIDGES, so to speak, are in the air, Southwark Bridge now being rebuilt, St. Paul's Bridge so far beyond the stage of projection that there are even critics who declare that a fiasco is upon us; Lambeth Bridge, rapidly falling to pieces, while the relief of Thames at Charing Cross from present degradation, and a new Charing Cross Road Bridge as a Great War Memorial, are as close to our hearts as any London improvement ever was.

I am aware that there are many members of the London Society who could have dealt with my subject with far greater authority than I am able to command, but I yield to no one in intense interest in a branch of architecture which has always held me. Why? I cannot say, but if I may touch upon a personal note, long after my interest in the subject had developed almost into a passion, I discovered hanging in the Town Hall of his native city a portrait of an early eighteenth-century ancestor, to whom the honour of a public portrait was accorded, as is related upon the picture, because he was a great projector of bridges, and consequent benefactor to the community.

The General Question.

Is there any development of the art more directly useful and practical, or more definitely capable of combining grace and beauty with use and dignity than the bridge of arcuated form? Here are no complicated trammels of planning, but wide interests of construction, capable of being reduced without loss of art to an exact science. Not for a moment do I suggest that a trabeated bridge is incapable of architectural success. But those monumental builders, the Romans, taught the world how the arch lends itself to bridge construction in the grand manner, and even when it is translated into his favourite metal the modern engineer, apt to think in steel trabeation, has discovered the arch's utility.

Now, I am making no extravagant statement in claiming that in a city like London, whose situation and lay-out are initially due to and dependent upon the river, there is no definite architectural feature better able to combine in the fullest sense those qualities which make for monumental success in architecture than a bridge across the Thames. If well disposed and laid out—an obvious essential—it is seen or ought to be from all sides, whether in connection with the river banks or from its flanking neighbours. In that sentence we condemn at once all bridges which can be classed as selfish and obstructive bridges, such as unduly confine the vista by their own existence.

Bridges are not only to be considered as units, but each one, in its practical purpose, be it for road or rail, part of one collated and calculated system of communication from bank to bank, equally inter-relative as a system of monumental architectural expression, without which no city of a great and historic race is worthy to be other than a city of the dead, or worse than dead—decrepit, mentally and bodily—unfit. I do not think anyone here will dispute my premises.

But before leaving the general question I would refer once more to the qualities of grace and line, which do not exclude those of power and stability, all of them capable of expression in fine bridge building. No better text upon the subject could be found than the following: "Beauty does not require ornament or expense, but demands, what may be more difficult to supply, correct taste in the designer." Those words, at the opening of an able treatise upon bridge building, go to the root of the matter.

Before confining ourselves to the individual bridges of London, a word as to Thames Side.

The existence of a shallow ford and easy crossing no doubt determined the position of the City of Westminster, just as the protection of a deep crossing determined that of the City of London. On these two bases London and its outgrowths have built themselves up.

Art or imagination could not have set out a grander ogee sweep of water than Thames from Chelsea Reach to the Pool. Particularly as it sweeps past Westminster and the rapid bend whereof Charing Cross Railway Bridge almost forms the meridian, its possibilities are infinite with the transverse lines converging towards the blunt point of the Surrey shore.

Nature has thus made our river majestic in its elements. It remains only for man to consummate Nature's handiwork, as befits the monumental development of a great city centre of Empire. On these grounds I have no hesitation in confessing myself at once a sceptic, or, if you will, a heretic, as to the views of those sentimentalists who would preserve and protect the Surrey-side mud flats for what they are.

Were the greenery Pepys and Evelyn saw there now we should cry out for what must have rejoiced them by the best of all harmonies—the harmony of contrast. But the mud flats of Southwark and Bermondsey are vastly other to-day. They are essentially artificial, precisely in the same sense as the colour of Thames water is artificial—man made. As well keep Thames water filthy instead of silver as wish to preserve what is but an outgrowth of the seamier side of modern commercialism in its proverbially callous treatment of Nature. One feels there is an intimate relation between the Commercial Road and the Surrey mud flats.

I am not straying from my subject in the least. Upon the treatment of the Surrey shore to a large extent must depend the design of any new bridges abutting upon it.

What is needed upon the part of both London and Southwark to-day is an active practical interest and concentrated effort in this question which concerns each of them equally and both of them jointly. If the interest and effort are wide enough and intelligent enough, some definite advance worthy of London will doubtless be made. The object of this paper is to stimulate interest by restating axioms and resolving facts, albeit trite, to those in this room and outside it who have given thought to the subject, or who care for their London.

It will perhaps be convenient not to take the bridges in the order of their building, but to begin at the Pool and work upwards, ending at Battersea, particularly as we thus make early acquaintance with by far the most historically interesting of all the bridges—London Bridge. If I dwell upon bridges that are definite works of architecture, my calling and predilection will be my excuse.

THE TOWER BRIDGE (Sir J. Wolfe Barry, 1886-1894).

The Tower Bridge comprises so wonderful a piece of hydraulic engineering that all the foresight and prevision made at vast cost to supplement its hydraulics have now been allowed to go out of use—indeed, need never have been. And with this mead of unstinted praise for its mechanics I hasten from a structure boasting no qualities to be classed as architectural, to another bristling with architectural as well as historical interest.

[Mr. Caröe next dealt at some length with London Bridge, of which his interesting account will appear in our next issue.]

(*To be continued.*)

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* Portion of a paper read before the London Society.

SIR JOHN VANBRUGH, BLENHEIM PALACE, AND WOODSTOCK.

SITUATED about two miles and a half to the west of Woodstock, Blenheim Palace commemorates, as every schoolboy knows, the mous victory of John Churchill, Duke of Marl- rough, at Blenheim, on the Danube, on August 13, 03. He received the congratulations of the Queen d of both Houses of Parliament, and by Act of rliament of March 14, 1705, the royal manor of oodstock was granted to him and his heirs, with lf a million sterling wherewith to build a palace. r John Vanbrugh, half-dramatist, half-architect, s entrusted with the work, and the indignities he ffered at the hands of the nagging and niggardly chess must have made him wish that he had stuck the drama, and it has been suggested that the ther worrying general effect of the huge building ithfully reflects the state of mind to which he was duced by the harassing tactics of the great Sarah. is bitter experience may even have shortened his e, for when he died, in 1726, he was only sixty ars old. In 1702 he had succeeded Talman as mptroller of the Royal Works, and in 1716 he llowed Wren as surveyor of Greenwich Hospital. cannot be said that Wren's architectural mantle scended upon him; for, as Mr. A. E. Richardson s said, "Vanbrugh, with all his imaginative genius r great conceptions and obsession for Titanic uctures, lost sight of the golden rule of simplicity design, and by introducing a multiplicity of atures sacrificed a dignity of effect to a gorgeously cturesque silhouette." Perhaps it is picturesque, though "silhouette" seems paradoxical. It has d its admirers—among them Sir Joshua Reynolds. Castle Howard, which Vanbrugh built for the Earl Carlisle, greatly pleased that nobleman, who warded him with the appointment of Clarencieux ng-at-arms. This success emboldened Vanbrugh essay the singular adventure of building a theatre r his own plays. It was a disastrous speculation; d Queen Anne consoled him by entrusting him ith some important State business abroad. It was rough the kindly Queen, no doubt, that he got also e commission to build Blenheim. While she lived got his fees, but afterwards he was left to the nder mercies of Duchess Sarah. What with the eanness of the Duke and the insolence of "that icked woman," as his experience justified him in lling her, Vanbrugh, whose natural gaiety and od temper were not easily repressed, came near to spair. He was knighted on the accession of eorge I. in 1714. Vanbrugh was then forty-eight ars old, if the date of his birth is correctly assumed 1666—possibly, it has been inferred from one of s letters, in the Bastille, which may account for his *oût du vaste*, and perhaps also, by revulsion, for s buoyant good humour and friendliness. His cial equipment was charming—"wit tempered by od humour, a genuine feeling of comradeship, an ceedingly fine presence, and a winsome face": all e endowments for a successful architect, but not cessarily for success in architecture. Probably no ilding has been more criticised than Blenheim, of hich one of the truest things said is that, "impres- ve as are the parts, they do not form an impressive hole." The dramatic unities are insufficiently served; the play is seen in a series of loosely lated acts. If the design of the palace has been too hemently decried, it has been praised with equal travagance; as, for instance, "This noble monu- ent of national munificence was erected by Sir John anbrugh, who has produced a most magnificent sult, highly flattering to our national pride, which considerably raised by a contemplation of this perb Temple of British Victory"; absurd indeed, but typical of the emotional view that is vastly more common, because it is vastly more easy, than critical estimate.

The general plan comprises an oblong central building, connected by colonnades to two projecting quadrangular wings, which on the principal front form the three sides of a great court, enclosed by iron palisades, the whole building being in extreme length 850 ft., and covering seven acres of ground. The wings are, or were, appropriated to the offices; each contains an open court—that on the north-east was called the kitchen court, and that on the north-west the stable court. The principal front stands north-west, opposite to which is the park, a long avenue terminating at Ditchley Gate. Other entrances to the grounds are called Wootton Gate, the Triumphal Gate, Hensington Gate, Eagle Gate, Bladon Gate, and half a dozen other entrances and exits occur in a circumference of about thirteen miles. The park, including the gardens, contains 2,700 acres, and a riding-place of about four miles in circuit is formed within the outer boundary. The chief approach is through the Triumphant Gate at Woodstock—a large archway with two posterns, its entablature supported by double detached columns raised on pedestals. The gate bears an inscription to the effect that it "was built the year after the death of the most illustrious John Duke of Marlborough by order of Sarah his most beloved wife, to whom he left the sole direction of the many things that remained unfinished of this fabric." The last phrase may, or may not, have been a knock at the architect; her Grace was quite capable of such paltriness.

Duchess Sarah, type for all time of the architect's worst kind of lady client—incredibly unreasonable, wantonly exacting and stingy to the last degree—was naturally a born Vandal. People of her temperament are without veneration for anybody or anything. When Blenheim Palace was planned she destroyed without remorse what remained of the ancient palace of Woodstock, caring nothing for its age, its history, or the quaintness of its architecture. Those remains stood opposite Blenheim, and consisted of the gatehouse where Elizabeth had been imprisoned, a noble porch, several turrets, and some portions of the walls of the hall and the chapel, in which there were two or three magnificent old windows. At a little distance on the south-west side was Fair Rosamond's bower—a room over a bath or well. According to Camden, Woodstock was erected by Henry I., who joined to it a royal park, enclosed with a stone wall, thus forming what is supposed to be the first park in England. Dr. Plott, in his "Natural History of Oxfordshire," says that the park was stocked not only with deer, but with "all kinds of wild beasts, which he procured abroad of other princes." It is claimed, however, that Woodstock was a royal seat in the time of the Saxons, and it is asserted that King Alfred translated Boetius there. Fabian the chronicler has a quaint reference to Rosamond Clifford's bower. Henry II., he says, made for her "an howse of a wonder workynge so that no creature, man nor woman, myght wyn to her but if he were instructe by the kynge or such as were ryght secret wt hym touchynge yts mater. Thus howse, after some writers, was named Dedalus werke, or howse, which is to mean after most exposytors an howse wrought like unto a knot in a garden called a maze." In 1275 Henry I. held a parliament at Woodstock, and there was born Edward the Black Prince. It was in the town of Woodstock that Geoffrey Chaucer was born.

A portrait of Sir John Vanbrugh appears on page 24.

THE PLATES.

Municipal Buildings, Stirling.

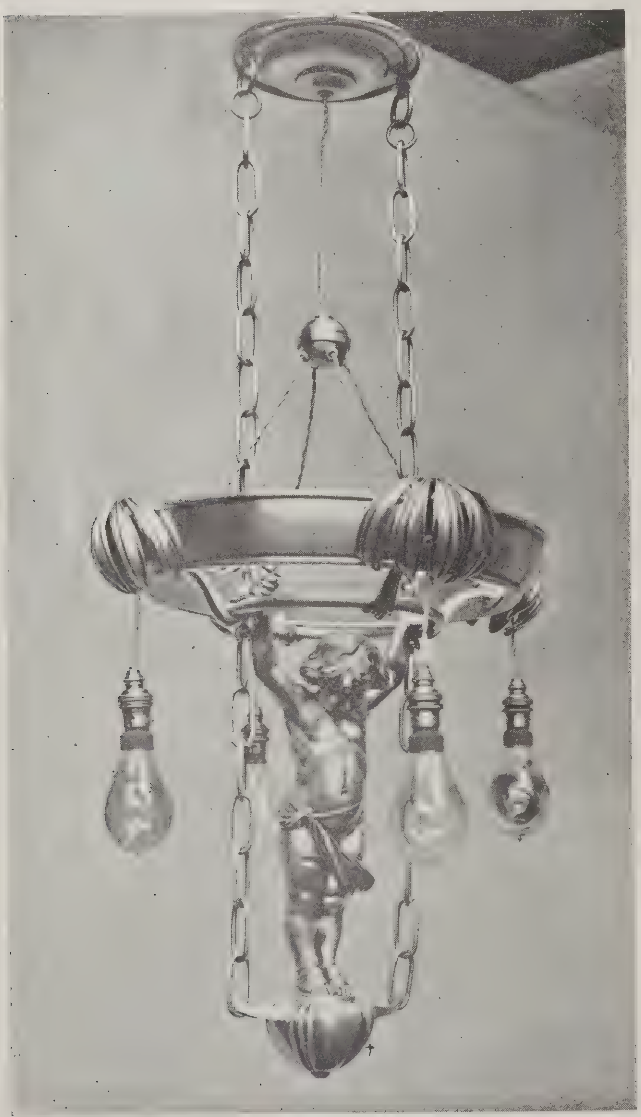
THESE buildings occupy a prominent site in Stirling, and are constructed of stone from Pasture Hill and Black Pasture Quarries. The main building, now practically completed, contains the council chamber, reception-rooms, offices for Town Clerk, Town Chamberlain, collector of burgh rates, burgh surveyor, sanitary inspector, medical officer, health visitor, and assessor. The principal entrance floor, stair, and walls are of marble, and the decorative features are in keeping with the public nature of the corporation buildings. The stone slates are from Caithness and York quarries; and the electric work fittings (illustrated below) were supplied by the Birmingham Guild and the Bromsgrove Guild of Applied Arts. The subject of the fitting shown to the left is "Victory," and the bracket lettered "Queen Mary," is one of a series showing the names of sovereigns of Scotland who lived at Stirling. An Edinburgh contractor supplied the entrance gates and the wrought-iron stair railing. The flag-staff on the roof is of reinforced-concrete, and the flat roof covering the upper stone tower is of the same material, and this work was executed by the Gray's Ferro-Concrete Company. The total cost of the buildings, without the police offices, is estimated at £25,000. The architect is Mr. J. Gaff Gillespie, F.R.I.B.A., Glasgow. A thorough system of heating has been installed by Messrs. Jas. Combe and Son, Glasgow. Plans appear on the next page.

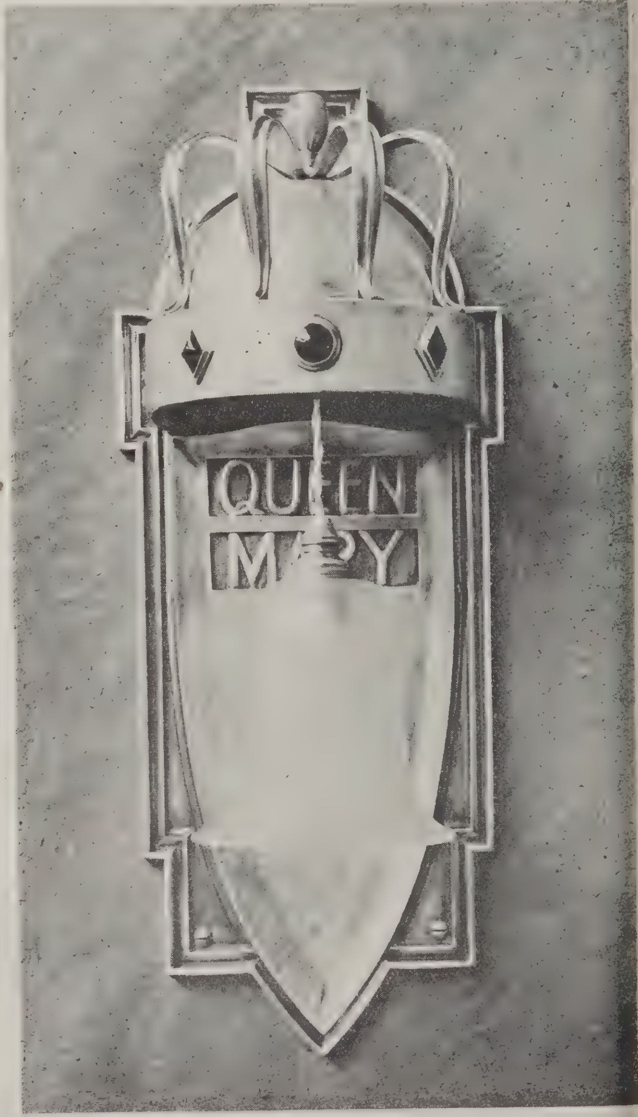
Blenheim Palace, Woodstock.

See the article on page 27, which includes some particulars of the ancient palace of Woodstock, and a glance at its interesting historical associations.

Chimneypiece in the Golf Club House, Sudbrook Park, Petersham.

James Gibbs built for John Duke of Argyll a villa at Sudbrook, and illustrated it in his "Book of Architecture." This villa, which is built of brick, with Portland-stone dressings, and has been dscribed as an Italian villa transplanted into English soil, is now the Richmond Golf Club-house. It contains a "cube-room" of 30 ft. Of this Mr. J. M. W. Halley has observed that "the circle, the square, the equilateral triangle, seem to possess subtle æsthetic qualities, just as certain numerals in poetry seem to contain in themselves the power of invoking tragedy." Our plate shows a detail of the chimneypiece, which is the main decorative feature of the cube-room, although it stands between two handsome and strongly competing doorways similar to that which is reflected in the mirror, and is flanked by fluted pilasters with elegant Corinthian





STIRLING MUNICIPAL BUILDINGS: ELECTRIC FITTINGS ON MAIN STAIRCASE.

J. GAFF GILLESPIE, ARCHITECT.

(Made by the Bromsgrove Guild from sketches by the Architect.)

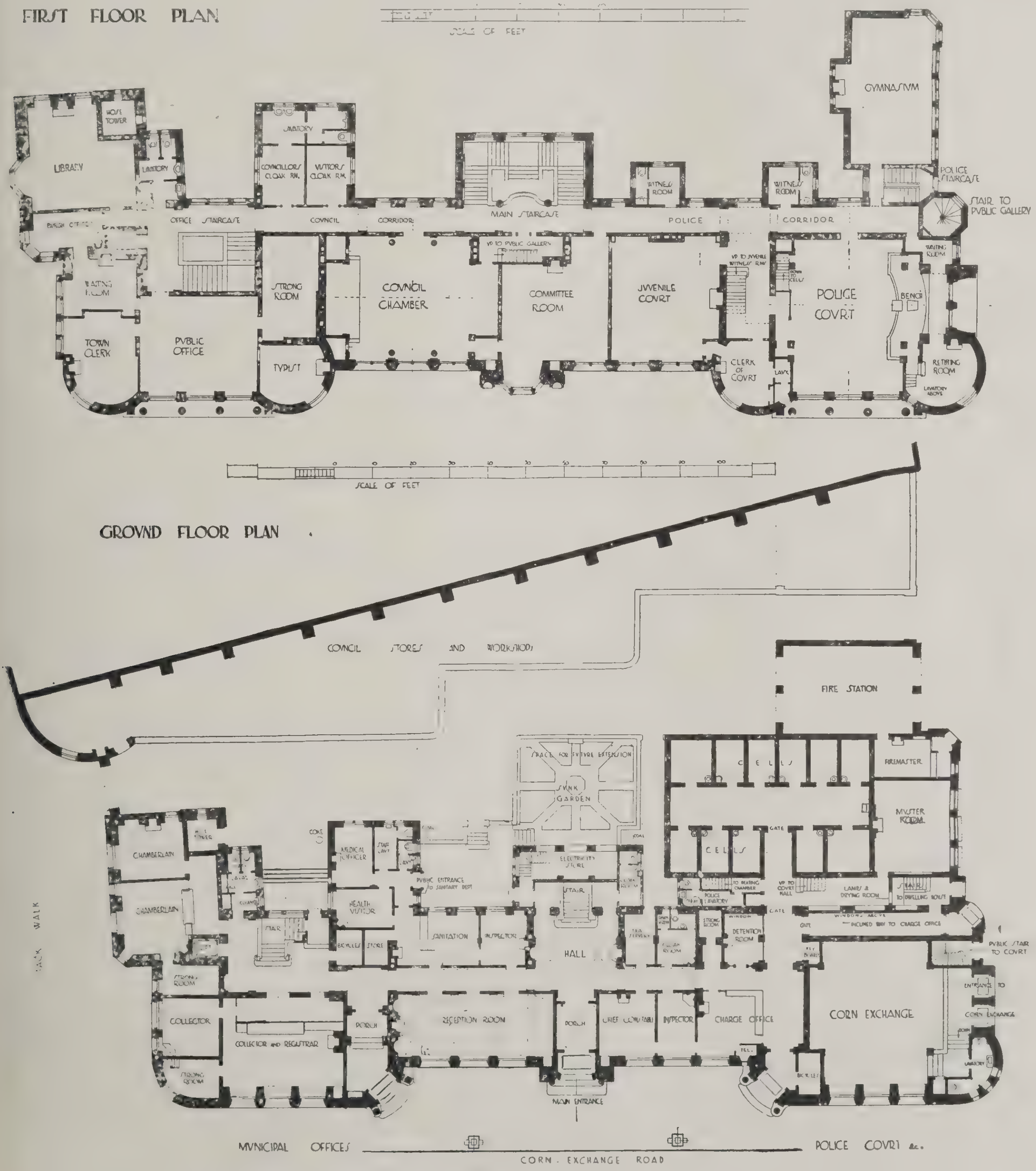
apitals. A coved and ornamented ceiling further elps to neutralise the heaviness that is rather oppresive in the design of the chimneypiece when shown part from its correcting environment. Modern taste night wish to dispense with the heads seen in profile, nd to simplify the mouldings, and, indeed, the whole cheme of decoration.

Design for a Drawing-room by Thomas Hope.

Thomas Hope, who may be said to have been the reator of the English version of the "Empire" style, vas born about 1770, and as a young man travelled for ight years in Italy, and also visited Egypt, Greece, nd the East, studying architecture. As a connoisseur n furniture design he stands pre-eminent among Englishmen, and in the arrangement and decoration of nteriors he showed a purity of taste amounting almost o fastidiousness. The drawing-room shown on our plate vas designed principally for the reception of the four large pictures of Indian buildings of which sketches appear on the walls, and the details of decoration and furniture are finely adjusted to the dominating idea. The sketch is reproduced from Hope's classic book of designs, "Household Furniture and Interior Decoration," which was published in 1807, and in which he handsomely acknowledges his indebtedness to Percier, with whom he had formed an intimate friendship.

Detail of East Front of Elgin Cathedral.

While a student of the Architectural Association Schools, Mr. George H. G. Holt, who is now a pilot in the Royal Flying Corps, made a series of drawings of Elgin Cathedral. One of them, a measured drawing of vaulting in the chapter-house, formed the subject of last week's double-page plate. This week we show, in a similar plate, his drawing of the east front of the cathedral. Both sheets show remarkably painstaking draughtsmanship, with commendable lettering.



MUNICIPAL BUILDINGS, STIRLING. J. GAFF GILLESPIE, F.R.I.B.A., ARCHITECT.

(For Elevation, see Supplementary Plate.)

NEWS ITEMS.

Sheffield Housing.

Sheffield Corporation is to erect 541 working-class houses at about £400 each.

School of Architecture, University College, London.

The work of the session 1916-17 in the School of Architecture at University College, London, was brought to a close on Thursday, July 5. Architecture Certificates have been awarded to Miss Faith Brooke and Mr. C. H. Basto.

Allies' Hospital at Hampstead.

A site for a hospital just opposite Golder's Hill Park, looking out over Hampstead Heath, has been commandeered by the War Office as a site for the Allies' Hospital Benevolent Society. There is room for the erection of hospital huts to hold 1,000 men.

Reinforced Concrete School.

The extension of St. Thomas's Church of England day-school, Granville Street, Birmingham, was opened last week. It is said to be the first school in the country built of reinforced concrete, and to be bomb-proof. It is a square building with a roof-playground and sliding windows, so that it can be turned into an open-air school.

To Producers of Road Materials.

The Secretary of the War Office makes this announcement: The attention of quarry owners, managers, or other persons engaged upon the quarrying or output of road materials in quarries, slag dumps, or slag works is drawn to the notification in the "London Gazette" of June 26, 1917, whereby they must furnish full details of their output and labour to the Secretary, Road Stone Control Committee, No. 35, Cromwell Road, London, S.W.7, on forms to be obtained from him.

Builders' Benevolent Institution.

Help is required for the Builders' Benevolent Institution, which, since its establishment in 1847, has granted pensions to many hundreds of deserving cases. The institution has suffered materially through the war, and it is with the greatest difficulty that the necessary funds are procurable to continue the payment of pensions already granted. Donations may be sent to the secretary, Pen Corner House, Kingsway, W.C.

Memorial to the late Dean Pigou.

At Bristol Cathedral the Dean Pigou memorial has been unveiled. It is a recumbent effigy sculptured by Mr. Newbury A. Trent, of London, from Stancliff stone, and occupies the first of the recesses near the pulpit in the south aisle, being exactly opposite the memorial of Dean Elliot in the north aisle. Though the sculptor had only photographs to guide him he has been singularly successful in his production, and the faithful likeness to the late Dean was noted with keen appreciation. The inscription at the base is "Francis Pigou, Dean of this Cathedral Church, 1891-1916."

A Competition Stopped.

At a meeting of Rotherham Borough Council Councillor Caine (chairman of the Housing Committee) moved a resolution of which notice had been given, with a view to rescind a resolution passed by the Council on April 4. On that date the Council decided that competitive schemes be invited from architects in the kingdom for laying out the Eastwood site and for designs for workmen's dwellings. Afterwards, the Local Government Board, in a letter, suggested that it would be better, in the circumstances, to ask for designs from some local architect. The resolution was adopted.

Reconstruction Problems.

At a "summer meeting" for the consideration of "After the War Problems of Reconstruction," which is to be held in the Hampstead Garden Suburb from August 3 to August 17 inclusive, the arts and crafts are to be very strongly represented, under the presidency of Mr. Henry Wilson. There are to be six conferences on various aspects of art in relation to the general health, development, and happiness of the community, and the necessity of a high standard of work as opposed to commercialism, and the readers of papers will include Sir John Burnet, Professor Lethaby, Professor Selwyn Image, Mr. George Clausen, R.A., Mr. Halsey Ricardo, Mr. Harrison Townsend, Mr. Frank Pick, and others.

Flower-Girls' War Shrine.

Princess Beatrice last week unveiled in the west outer wall of St. Clement Danes Church, Strand, a War Shrine, bearing the names of 650 men of the parish who have given their lives for their country. The memorial is designed by the wife of the Rector, Mrs. Louie Pennington-Bickford, who has for several years carried on a useful work on behalf of London flower-sellers. It is a mark of their appreciation of her efforts, as well as of their regard for the memory of our dead soldiers, that the shrine is their gift and was florally dressed by them. It is carved in oak, and consists of a cross charged with a triptych, on which the names are inscribed, beneath being a kneeling angel holding out a laurel-wreath towards the names. The flower-girls, with baskets of bright blossoms, lined up as a guard of honour for Princess Beatrice in the churchyard.

A Lady's View of House-planning.

In the course of an address on "The Labour-Saving Home of the Future," delivered at the National Economy Exhibition, Mrs. C. S. Peel, of the Food Control Department, said that women's labour and even lives were wasted every day owing to the way in which our houses were built and arranged. We wanted houses without basements, with their lack of light and fresh air. Service lifts were also needed; and gas and electricity should be substituted for coal and for the devouring dirt-making range. By eliminating coal one-third of the work in all their houses would be saved. There should be a hot as well as a cold water service in every house, and to complete labour-saving they required public kitchens with the best apparatus and most skilful cooks. Mrs. Lloyd George's observations at the same meeting are commented on in our editorial pages.

Teesside Developments.

At a meeting of the Tees Conservancy Commissioners at Middlesbrough, sanction was granted to the conveyance of land at Seaton Snook to the Sulphide Corporation, and for the construction of a wharf. The Works Committee minutes, which were approved, placed on record a statement by Alderman T. Gibson Poole, that, having regard to the recent large sales of land on the Durham side of the river, he was of opinion that the time had arrived when steps should be taken by the Middlesbrough Corporation to secure the necessary site at a point to be decided upon to enable the Corporation to provide additional means of communication between the borough of Middlesbrough and the north bank of the Tees and suggested that the general manager render assistance to the Corporation in this connection. It was decided, with regard to the various areas of land on the north bank of the Tees remaining unsold, the general manager supply the Corporation of Middlesbrough with information as to the ownership, and any other requisite particulars.

Suggested Building Trades Exchange for London.

The Minister of Labour has appointed the following to form the Building Trades Central Advisory Committee (Employers), which will advise the Employment Department on matters affecting employers in the building trades in connection with the administration of the employment exchanges: Messrs. J. P. Cox (Confederation of National Associations of Building Trades Sub-contractors); F. L. Dove, L.C.C., S. Easten, and A. J. Forsdike (National Federation of Building Trade Employers); T. Foster (National Association of Master House Painters and Decorators of England and Wales); Joseph T. McArthur (Association of Master Painters in Scotland); T. McHugh and J. Storrs (National Federation of Building Trades Employers); H. H Spittal (Scottish National Building Trades Federation); W. F. Wallis and H Willcock (National Federation of Building Trades Employers). The committe held their first meeting on Tuesday wee and elected Mr. J. Storrs chairman, an Mr. F. L. Dove vice-chairman. They the considered the best method of avoidin delay in placing men through the employ ment exchanges and the proposal that central building trades exchange shoul be set up for the London area.

Strengthening of Poughkeepsie Bridge.

The first point, from its entrance int New York Bay, at which the River Hu son is bridged is seventy-three miles fro the Grand Central Station, New York Cit or more than half-way to Albany. This by the cantilever bridge at Poughkeepsi by which the Central of New Englan Railway joins the New York, New Have and Hartford Railroad with the systems New Jersey and other States west of t Hudson River. The length of the brid proper is 3,094 ft., of which there is centre cantilever span of 546 ft., flank by two anchor spans of 525 ft. each a two cantilever spans, each of 548 ft., whi have anchor arms forming 200-ft. sho spans. The height is about 165 ft. abo water-level, and a double line of rails carried. The bridge was opened in 18 and was strengthened in 1906. With t great increase in engine and train loadi of the past few years, the bridge could n safely carry these loads on both trac simultaneously, nor could it be reinforc to such an extent as to do this. T alternatives were to eliminate the pos bility of both lines being used at the sa time or to build a new bridge. The form plan was adopted, as the cost will be latively small, and although the traffic heavy, it can be handled without trou over the single-track links. The princi change in the bridge will be the reconstru tion of the floor system using long a heavy floor-beams that will distribute t load over the three lines of trusses. W the present double track arrangement ea track has an independent floor system.

WAR·BVILDINGS·SECTION

WAR-TIME LAUNDRY EQUIPMENT.

average steam laundry plant com- ises, say, a dozen power machines of turning out domestic washing extent of fifty or sixty pounds er week, a description which is ap- e to perhaps three-fourths of the aundries in Great Britain. In the f London, however, there are establishments where the plant is nsive, and the workers are so numerous, that the laundry assumes the character of a large factory.

The development of the steam laundry is accounted for in many ways, apart from the growing tendency of the general public to turn over their domestic washing to the tender mercies of the "professionals." In large cities the constant increase in the number of tea-rooms, restaurants, and hotels has done much to develop the steam laundry industry, especially the particular branch known as "flat trade," which, as the name implies, refers to the laundering of flat goods such as tablecloths and serviettes; and while a few of the larger metropolitan caterers possess their own private laundries, the vast majority enter into contracts with steam laundries for the washing and finshing of all their work. Shipping com-

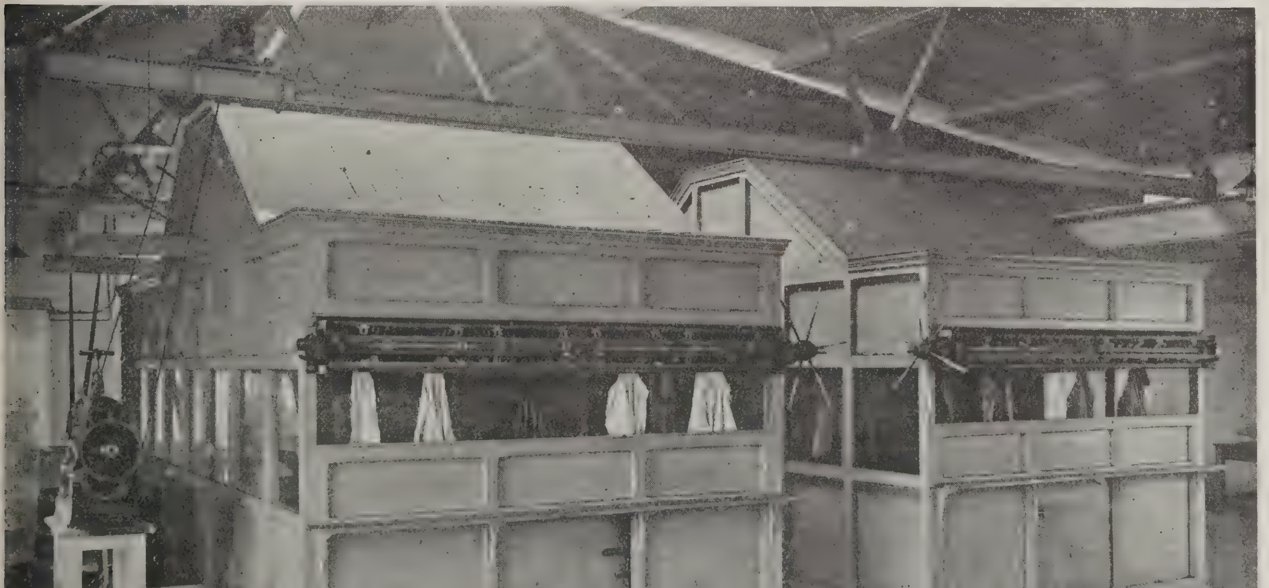


Fig. 2. The New System of Mechanical Drying. (For Figs. 1 and 3, see page 32.) *Photo: Campbell Gray.*

WAR-TIME LAUNDRY EQUIPMENT.

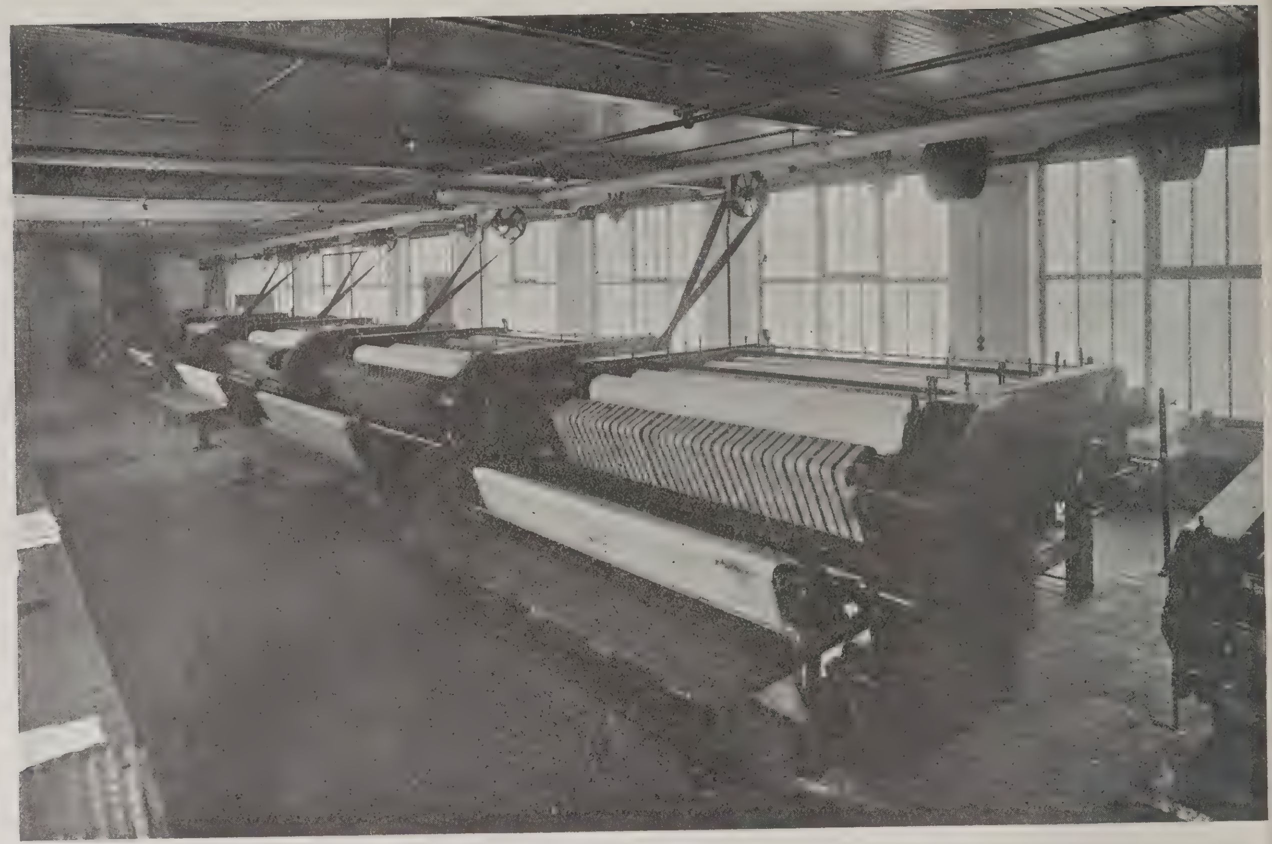


Fig. 3. Latest Type of Multiple Ironing, Drying, and Finishing Machines. *Photo: Campbell Gray.*

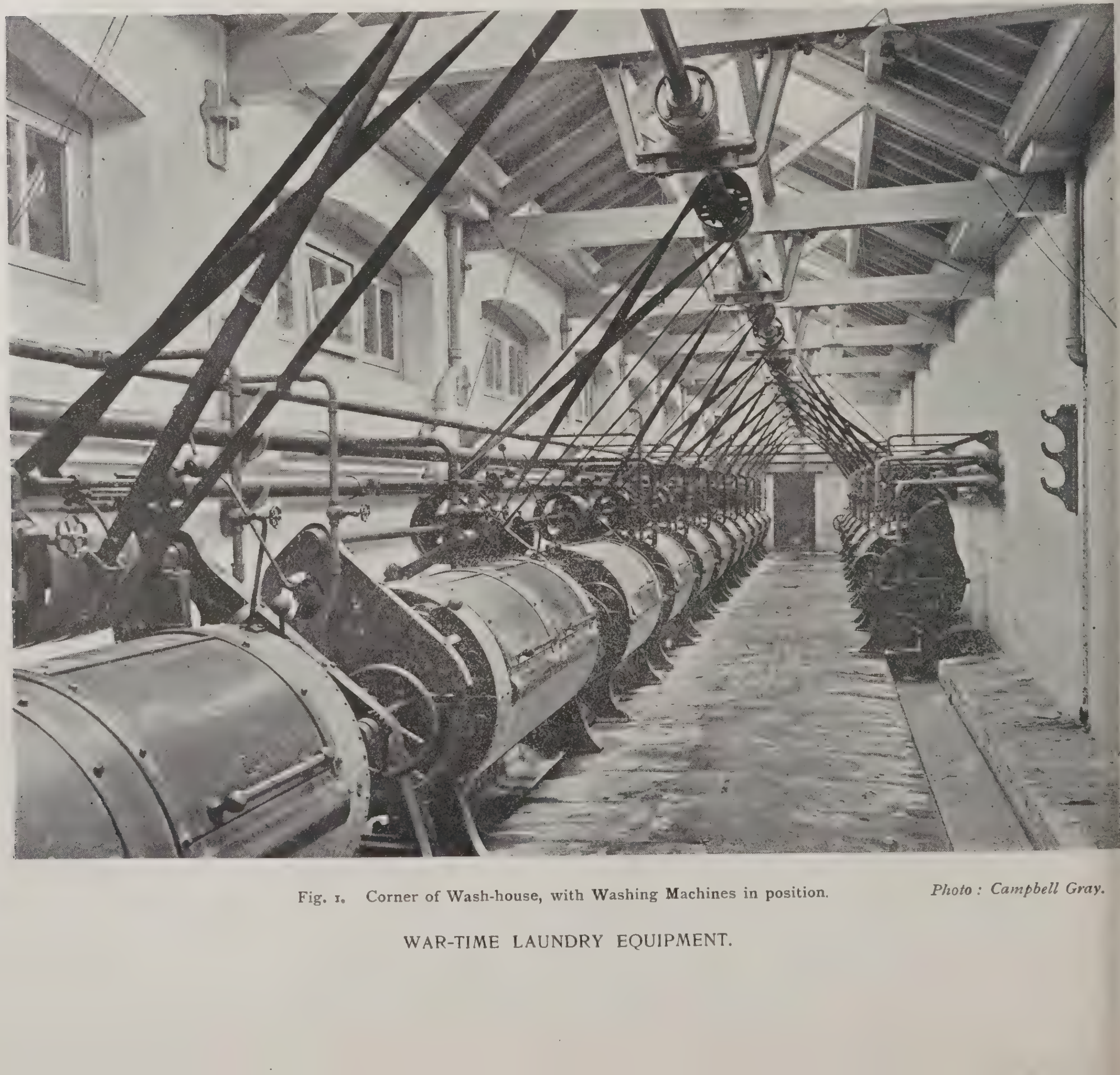


Fig. 1. Corner of Wash-house, with Washing Machines in position. *Photo: Campbell Gray.*

WAR-TIME LAUNDRY EQUIPMENT.

panies running passenger vessels are also regular contractors with steam laundries, for which class of trade machines of the latest types, capable of turning out a large volume of work on short notice, are absolutely essential. Further, the vast aggregations of soldiers and munition workers have doubtless increased the work of the steam laundries.

In the accompanying illustrations are shown corner views of the various departments of one of the largest steam laundries in London, if not in the world.

Fig. 1 (page 32) is a view of a portion of the washing-houses, showing long lines of power-driven metal washing machines, with their network of steam pipes and hot and cold water supply pipes. All those machines are of the largest size, and will each carry a load equal to 300 pieces, which can be washed in forty-five minutes, with no handling or manual labour whatever beyond the loading and unloading of the machines.

Assuming a complement of forty machines of all sizes, washing eight loads of even 200 average pieces each per working day, it will be seen that no fewer than 64,000 articles, of the size, say, of a man's shirt, can be washed in ten hours.

Fig. 2 (page 31) is a corner of the drying-room, with two of the latest continuous drying machines loaded with goods. By this system the articles to be dried are hung on hooks and carried through a steam-heated chamber on travelling conveyors and automatically discharged into receptacles at the delivery end. The hot air inside the chambers is continually being changed by means of belt or motor-driven fans, so that the atmosphere is conducive to quick drying. One of those machines will carry at one load 450 shirts or articles of similar bulk, and as the whole process does not exceed twenty-five minutes the volume of work executed per day is enormous.

An important advantage which this latest system of mechanical drying possesses is that the operators need not remain in the heated chamber longer than necessary to remove the baskets or trays of dried goods which have fallen from the conveyor.

Fig. 3 (page 32) is a corner of the ironing and finishing department, where the bulk of the "flat work" is handled. The four machines shown in position are the last word in this class of appliance. Each machine comprises six metal rollers wrapped in woollen and cotton coverings, and revolving in steam-heated beds or chests of concave form, while there are two large steam-heated rollers underneath. The articles to be finished are passed into the first of the six rollers by means of travelling ribbons or feed-bands, which not only ensure that they are fed-in straight, but also obviate the risk of accident, as the operator's fingers are far removed from the revolving rollers. Passing between the rollers and the steam-heated chests the linen is carried by a travelling band on to the first of the large heated drums underneath, then to the second, and, finally, by means of the band, are discharged in a finished state at the delivery end of the machine. Four girls are required to work each machine, the size of which may be imagined from the fact that its weight is twelve tons. The output of this gigantic and yet simple machine is astonishing, especially when it is remembered that the following figures do not represent specially prepared tests, but the result of an ordinary period of work, when the machines were not necessarily working under the best conditions: Output of one machine during a 54-hours week: Steam pressure on chests, 65 lb. per sq. in., and on large rollers 20 lb. per sq. in.: 3,490 bed sheets of large size, 524 quilts, 3,800 tablecloths, 5,000 towels, 4,600 kitchen cloths; total, 17,414 pieces.

On another occasion, when special note was retained of output for a period of seventeen hours, the articles dealt with were—3,000 bed sheets, 1,100 pillowslips, and 3,660 towels; a total of 7,700.

From the foregoing data and illustrations, the reader will gain some insight into a branch of industry which has made rapid strides within the last twenty years, and in course of time may entirely eliminate the trouble and worry of "washing day" at home. What is more pertinent to the present occasion is that the steam laundry is an important means of maintaining an adequate supply of clean underwear for large numbers of soldiers, sailors, and munition workers.

WOMEN'S WAR-WORK EXHIBITION AT LEEDS.

The series of exhibitions of women's work that is being given by the Technical Section of the Labour Supply Department in the Ministry of Munitions is continued by an exhibition at the City Art Gallery (July 9 to 21), Leeds, which was to be open for a fortnight. In accordance with the practice that has been pursued, it is more extensive than its predecessors at Bristol, London, and elsewhere; and its value will be enhanced by a considerable amount of practical information that is given with the majority of the specimens.

The exhibition consists both of examples of work actually made and of photographs of women making them. and they are divided into fourteen groups.

Engines for Aircraft.

The first of these groups deals with engines for aircraft, and includes parts of the Clerget, Hispano-Suiza, La Rhone, Beardmore, Gnome, and R.A.F. types. Eighty-one parts of these are shown, but they represent a far greater variety of operations. The machining, for example, of one specimen, representing a certain stage in the manufacturing of Clerget cylinders, includes twenty-six operations, all to close limits, twenty-three of which are done completely by women. In many cases the particulars given by the makers extend to the description of the machine on which the operation is done, of the operation itself, the limits of accuracy that are required, the time that is allowed, such particulars as are useful of the extent of skilled supervision, and information as to who sets the work and the tools and grinds the tools when necessary. The operations include practically all machining and some fitting, and the limits are as low as in any other practice of the highest class.

Engines for Motor Cars, etc.

A similar class of work is shown under the second group, which includes internal combustion engines for motor cars, "tanks" (landships), etc., driven both by petrol and by oil. They include parts of the 5-in. by 6-in. and 7½-in. by 8-in. "tank" engines, the six-cylinder National petrol-tractor engine, the motor-bus and several types of motor lorry engines, and a 20-25 h.p. oil engine, 151 parts now being shown. Similar particulars are given for the manufacture to those that are given with the aeroplane engines, and the work is done to similar limits and includes the same variety of operations. The gauging is done variously by micrometer or by Newall and other standards, and centre-lathes are used freely; a large part of the gear cutting—on modern machines a much simpler business—is also done by women.

A number of accessories for internal combustion engines makes up a small group, of which perhaps the most interesting specimens are the sparking plugs and the armature for magnetos. The sparking plug, mica-insulated, is assembled complete by women to a limit of 0.003 in., the centres being made detachable for cleaning. The armature-core is pressed, milled, turned, and drilled by women under male supervision; the condenser laminæ are pressed and assembled; the end caps are turned, milled, and drilled; and a complete armature is wound, connected, ground, and tested with a current of 15,000 volts.

Another interesting small group is that of steam-engine parts, such as valve-rods, axle-boxes, coupling-screws, etc. Some of this work is done by women under the supervision of men.

Guns and Gun Components.

A large and important group is that of guns and gun components, of which 128 specimens are shown, including a large variety both of designs and size. Parts, for instance, are shown of the 4-in. and 4.5-in. guns, the 6-in., 8-in., and 12-in. howitzers, the 12, 13, and 18 pounder guns, the 3-pounder and 6-pounder Hotchkiss; in almost all cases with information such as has been mentioned in connection with engine work. The parts are of great variety. They include several specimens of breech screws and many other parts of the breech mechanism. In the 8-in. howitzer, for example, practically the whole of this important part of the gun is done by women under male supervision. The vent axials, of which the 6-in. and 8-in. were as prominent at the London Exhibition, appear again, together with the 12-in.

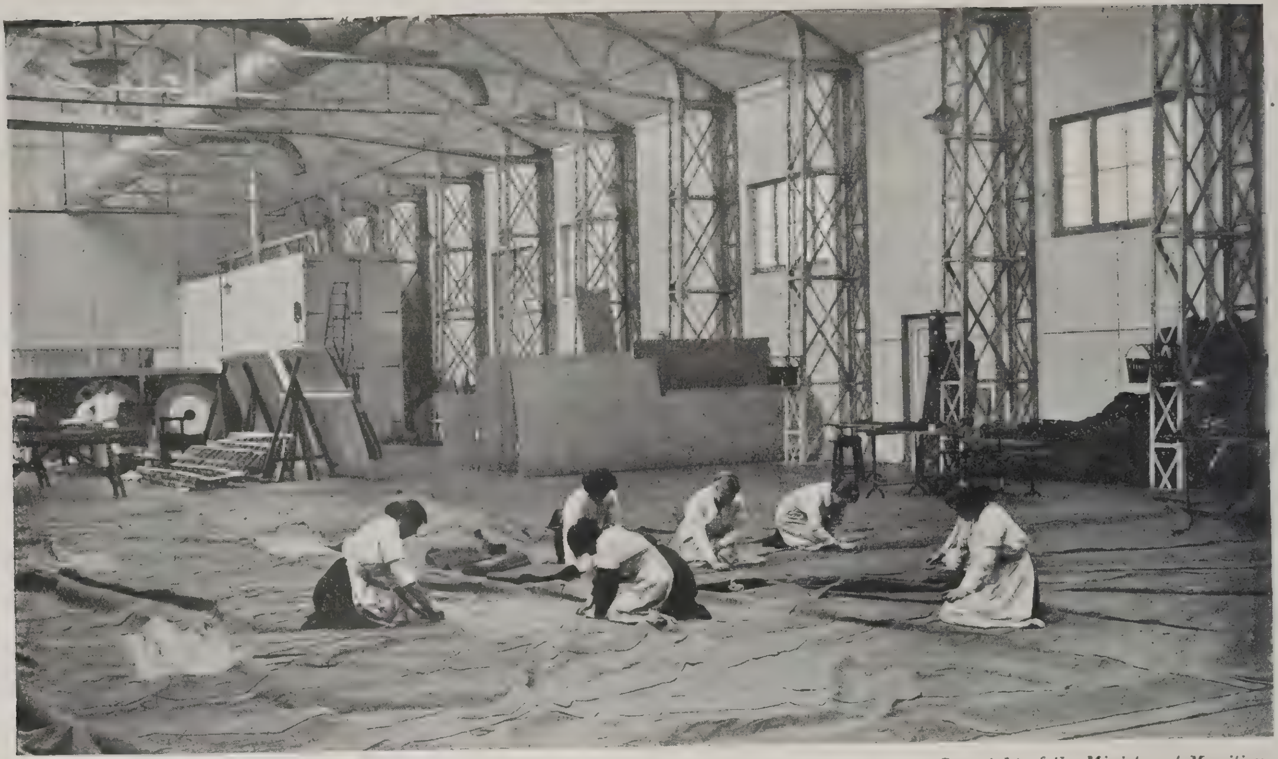
A notable part of women's work on guns relates to the optical instruments by which the firer is directed. Of these they are doing a large part, both in the grinding of the lenses and prisms and in the erection of the optical system, as well as in the metal work.

Small Arms.

Eighty-nine samples are shown of parts of small arms, including many of the Lewis and Vickers machine-guns and the Lee-Enfield rifles. Here the number of operations involved in quite small pieces is particularly marked. It includes not only press work, which enters so largely into the construction of machine-guns, but also a large variety of machining. The bolt, for example, of the Lewis gun includes no less than twenty-one operations, occupying in all 3½ hours. The information with regard to the machines used on the work of this group is particularly detailed and instructive. The limits, as in most other sections, are up to as close as half a thousandth of an inch.

Gauges, Cutters, Dies.

The group of gauges includes screw, ring, cylinder, and plug gauges to limits as low as 0.0003 in. 116 specimens are shown of cutters and test pieces of many varieties. The group of dies, etc., includes



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WOMEN CUTTING OUT AND TACKING TENTS IN AN AIRCRAFT FACTORY.

(Published by Special Permission of the Ministry of Munitions.)

an instructive collection of seventy-one punches and dies for cartridge making. This is an extremely important branch of work that is necessarily in constant demand, and the ability of the women to undertake it is particularly fortunate.

Aircraft Work.

Of the metal work for aircraft eighty-seven specimens are shown. These include a good deal more than machining or cutting operations. Thus many examples are shown of welding, and these include parts of vital importance to the structure and working of the machine. The group of aeroplane woodwork includes almost all the most important parts of the structure and fittings. Women, for example, completely assemble the aileron; make compression ribs, aileron ribs, a variety of camera parts, and munition boxes and racks, and a great deal of the structure of the planes and body. Two specimens are shown of the large propeller, showing it respectively in an intermediate stage of manufacture and completely finished and polished. The times occupied in making most of these pieces are stated, and in some instances are amazingly low. In the illustration women are shown at work cutting and tacking tents in an aircraft factory.

A small but interesting collection is shown of projectiles produced entirely by women, and, of course, in enormous quantity.

Seventy-nine samples are shown of miscellaneous engineering work, exhibiting the same variety of machining as with the work shown in other groups.

Optical Munitions and Glassware.

The last group of specimens is devoted to optical munitions and glassware. Both in the metal and glass parts women are doing by far the majority of the operations.

The exhibits include not only clinometers, which women calibrate, engrave, fill in, polish, and lacquer, but also instruments such as directors and dial sights for guns, periscopes, prism binoculars, range-finders, etc., in which women do anything from 70 to 90 per cent. of the whole of the work, including fine optical adjustments. The exhibit shows not only complete instruments, but the parts in every stage of manufacture from the rough glass upwards. The glass-ware consists mainly of medical and surgical appliances, which are shown in considerable variety, and include some very delicate glass-blowing executed in the best style. Specimens are also shown of hydrometers and tubes for mine horns.

The exhibition is completed by a large number of new photographs showing women actually making work such as is shown in the samples, and of a good deal more that cannot be shown otherwise. Women, for instance, are seen in a colliery daubing coke oven doors, discharging and quenching coke, stacking and loading it into wagons, receiving it from aerial ropeways, and doing general labouring. In a rolling mill they are carrying rails to the saw, which they operate, and punching spike holes in light rails, as well as charging the furnaces of the rail mills. They are seen also doing a variety of work such as the preparation of light railway tracks and the drilling of points crossing for heavy tracks. In a chemical works they are seen carrying hot naphthalene, carrying molten naphthalene in a ladle, and breaking it up, operating the benzol washer, loading trucks, etc. In a steel works they are marking and nicking billets with the oxy-acetylene blow-pipe, operating the hydraulic charging of a continuous furnace, feeding re-heating furnaces, and scaling hot billets, operating hydraulic presses, and doing a variety of labouring work. In a foundry they are making cores, both by hand and machine, doing machine moulding, skin-drying moulds, mixing sand in the pug mills, operating the band saw and grinder in the fettling shop, and doing general labouring.

LEGAL.

Builders' Liability for "Third-Party" Accident.

June 10. Exeter County Court. Before Judge Lus Wilson, K.C.

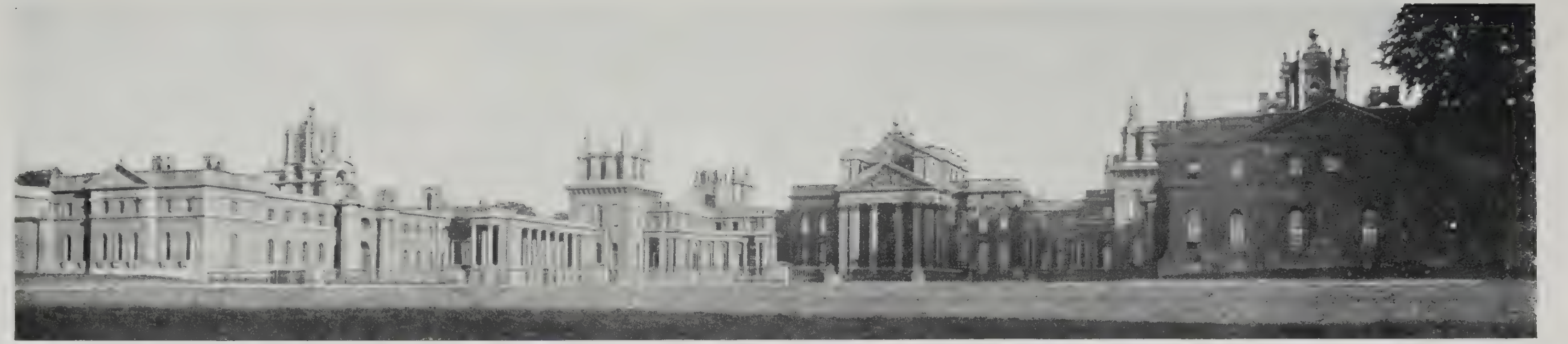
Miss Douglas sued Messrs. Force an Son, builders, for compensation for in juries received to her thumb on the righ hand, which she sustained through fallin into a pit which the firm's workmen ha opened in the back yard of her house i order to repair the drains, and which sh alleged had been left open without suff cient protection on January 20. Mr. Seage appeared for the plaintiff, and Mr. S Ernest Crosse was for the defendants.

Three witnesses stated that the plainti fell into the pit, and when she was got ou she was in a muddy and wet state. The also said that the whole of the court ha been dug up, and there was only a narro place to walk on. There was a narro plank to the lavatory. They admitted, i cross-examination, that they walked o the path and along the plank withou slipping into the pit.

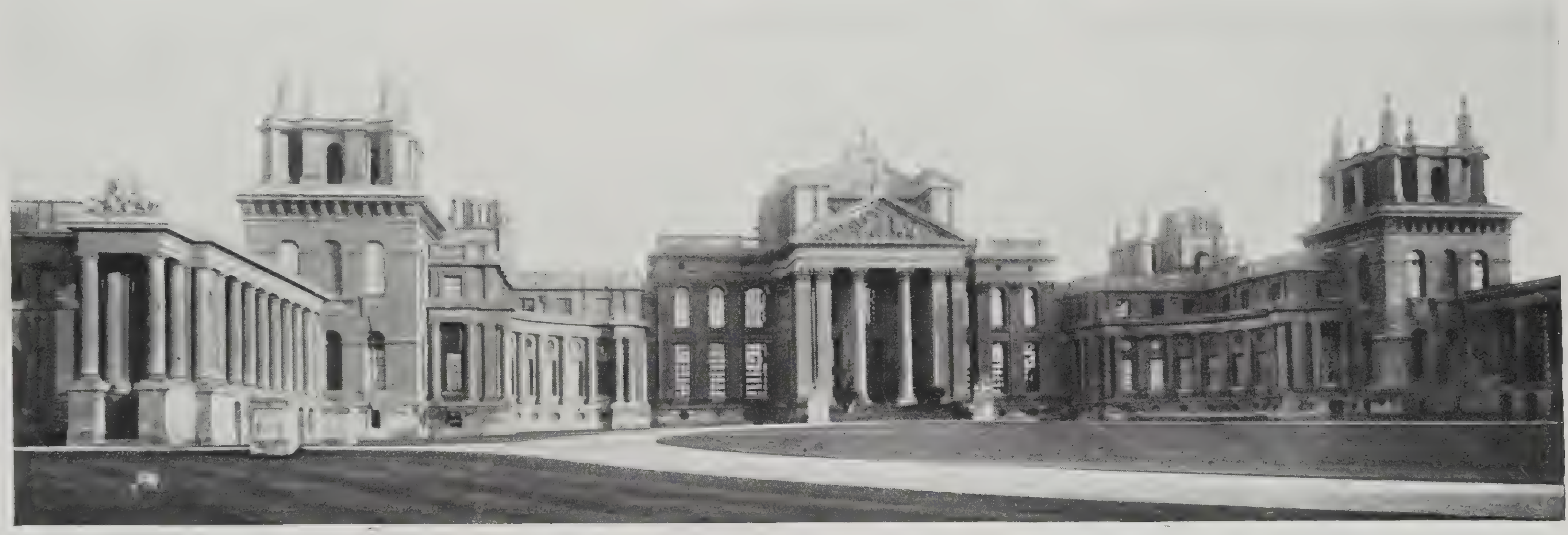
Mr. Crosse argued that there was n obligation on his clients to fence. Even the pit was not fenced, with two plank there was no unusual danger or anythin in the nature of a trap, which had to b proved before plaintiff could recover.

His Honour said it was clear that th defendants' witnesses' evidence that the p was covered in could not have been tru because if it had been, the accident cou not have happened. It was the duty of th defendants to leave the pit reasonably saf In his Honour's opinion the place was su that a reasonably careful person mig have fallen in.

A verdict was given for plaintiff f £6 10s. damages. His Honour order stay of execution for ten days, in order give Mr. Crosse an opportunity to appe if his clients desired.—Exeter "Expre and Echo."



South-east Front.



North-west Front.

MONUMENTAL ARCHITECTURE (SERIES II.). XV.—BLENHEIM PALACE. WOODSTOCK. OXFORDSHIRE: GENERAL VIEWS.

SIR JOHN VANBRUGH, ARCHITECT.

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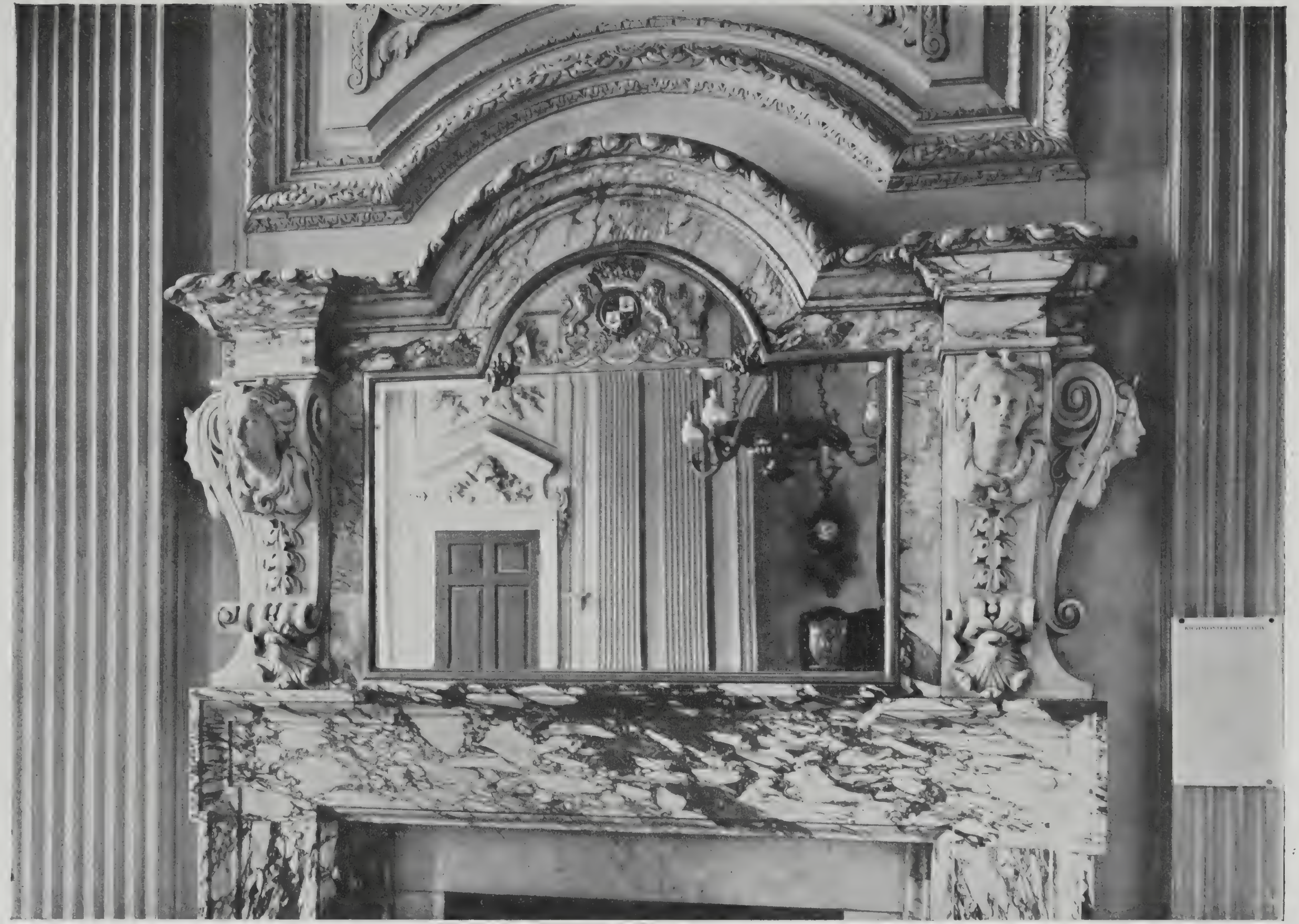
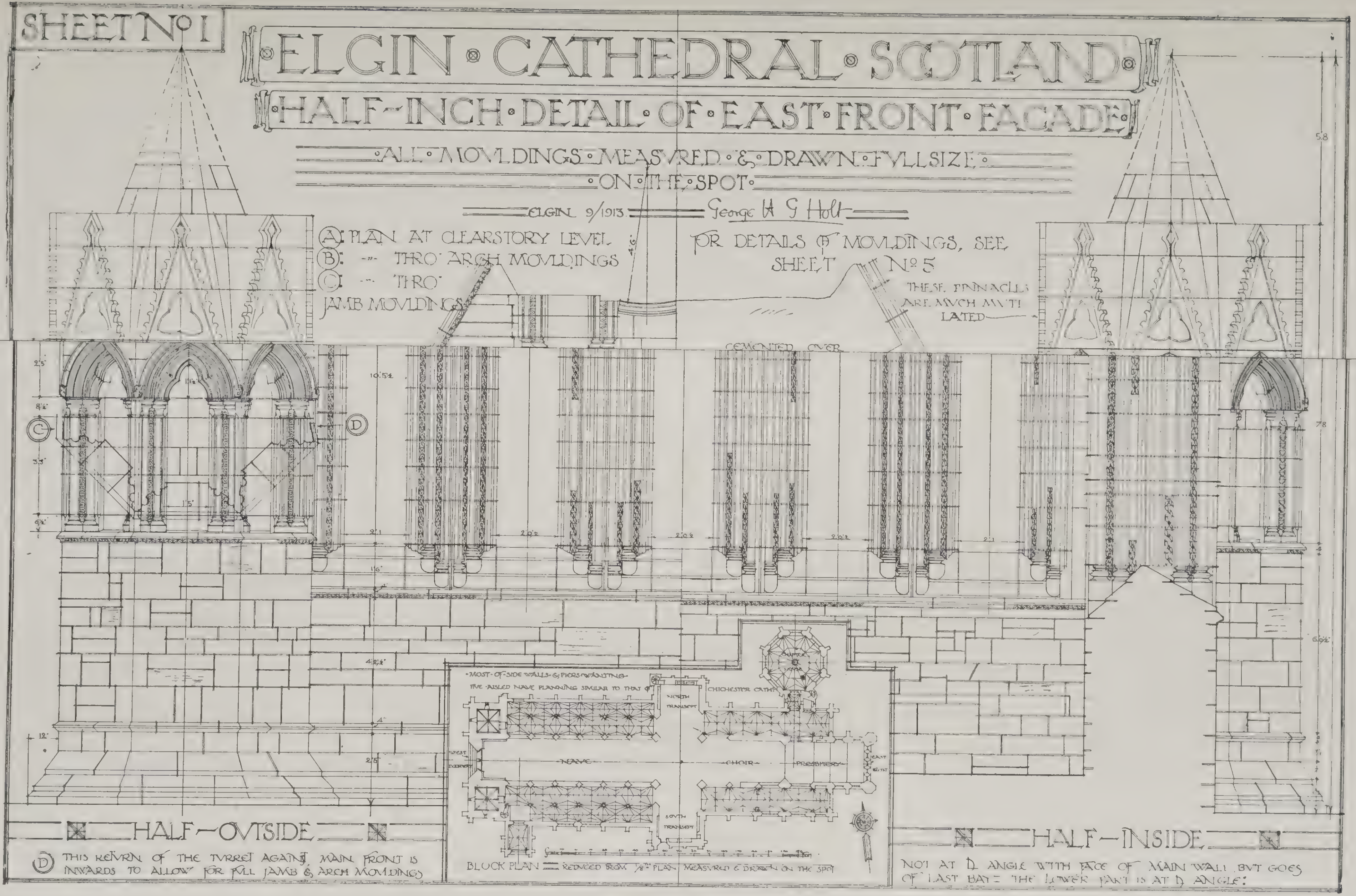


DETAILS OF CRAFTSMANSHIP (SERIES II.). XXXII.—CHIMNEYPIECE IN CUBE ROOM OF THE GOLF CLUB HOUSE, SUDBROOK PARK, PETERSHAM.

JAMES GIBBS, ARCHITECT.


SHEET No I
ELGIN · CATHEDRAL · SCOTLAND
HALF-INCH · DETAIL · OF · EAST · FRONT · FAÇADE
ALL · MOULDINGS · MEASURED · & · DRAWN · FULL SIZE ·
· ON · THE · SPOT ·
ELGIN 9/1913
George H G Holt
A: PLAN AT CLEARSTORY LEVEL
B: " THRO' ARCH MOULDINGS
C: " THRO' JAMB MOULDINGS
FOR DETAILS OF MOULDINGS, SEE SHEET No 5
THESE PINNACLES ARE MUCH MUTILATED
CEMENTED OVER
D
HALF—OUTSIDE
D THIS RETURN OF THE TURRET AGAINST MAIN FRONT IS INWARDS TO ALLOW FOR FULL JAMB & ARCH MOULDINGS
HALF—INSIDE
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· MOST · OF · SIDE WALLS · & PIERS · WANTING ·
FIVE-AISLED NAVE PLANNING SIMILAR TO THAT OF CHICHESTER CATHL
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EAST FRONT
BLOCK PLAN — REDUCED FROM 1/8TH" PLAN MEASURED & DRAWN ON THE SPOT
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10.5¼
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2.0½
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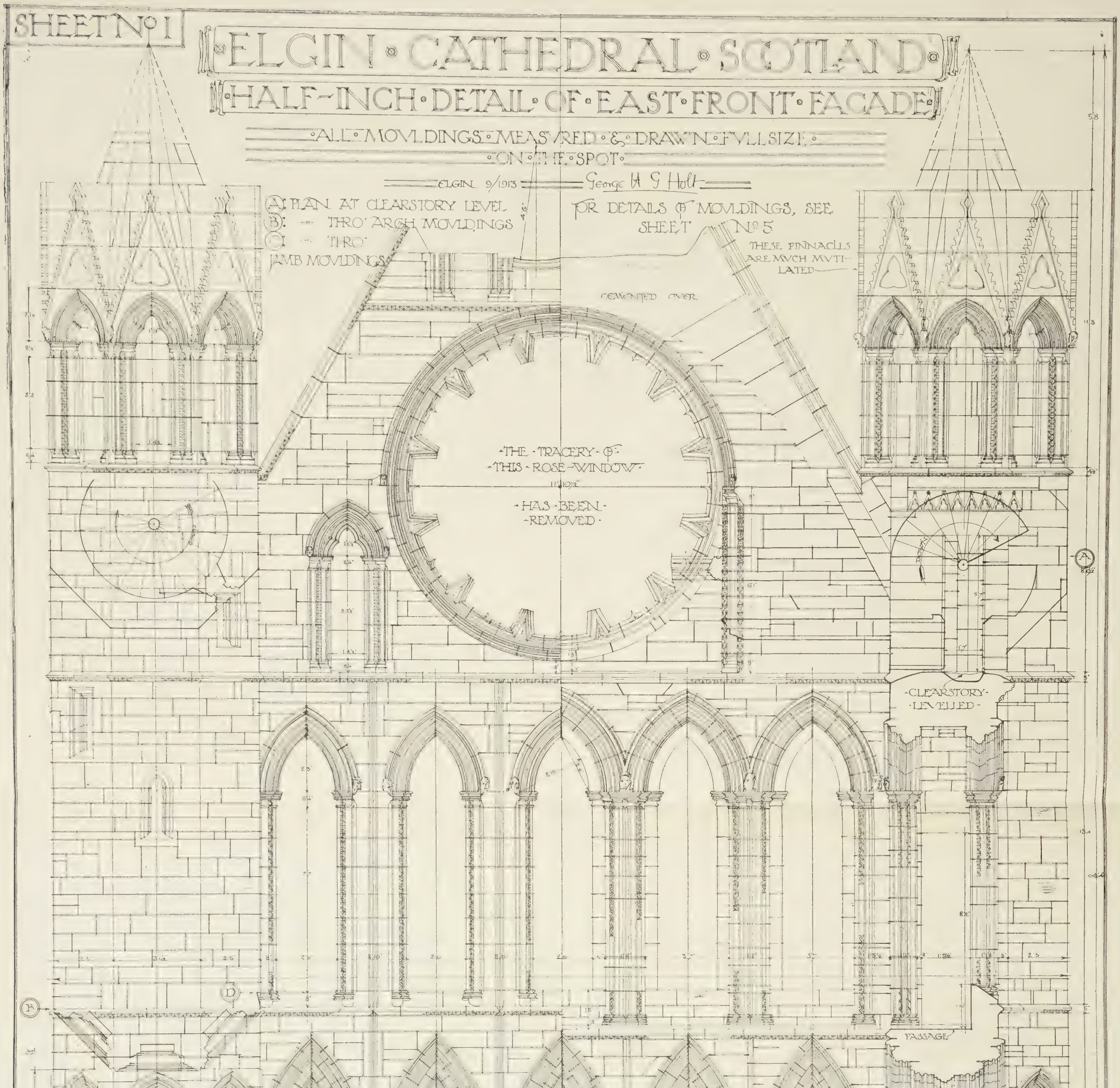
4.2¼
4
2.6
1.2
4.6

STUDENTS' DRAWINGS (SERIES III.). I.—ELGIN CATHEDRAL: DETAIL OF EAST FRONT FAÇADE.

BY GEORGE H. G. HOLT.

plement to "The Architects' and Builders' Journal," Wednesday, July 18, 1917.


SHEET Nº 1
ELGIN • CATHEDRAL • SCOTLAND
HALF-INCH • DETAIL • OF • EAST • FRONT • FACADE
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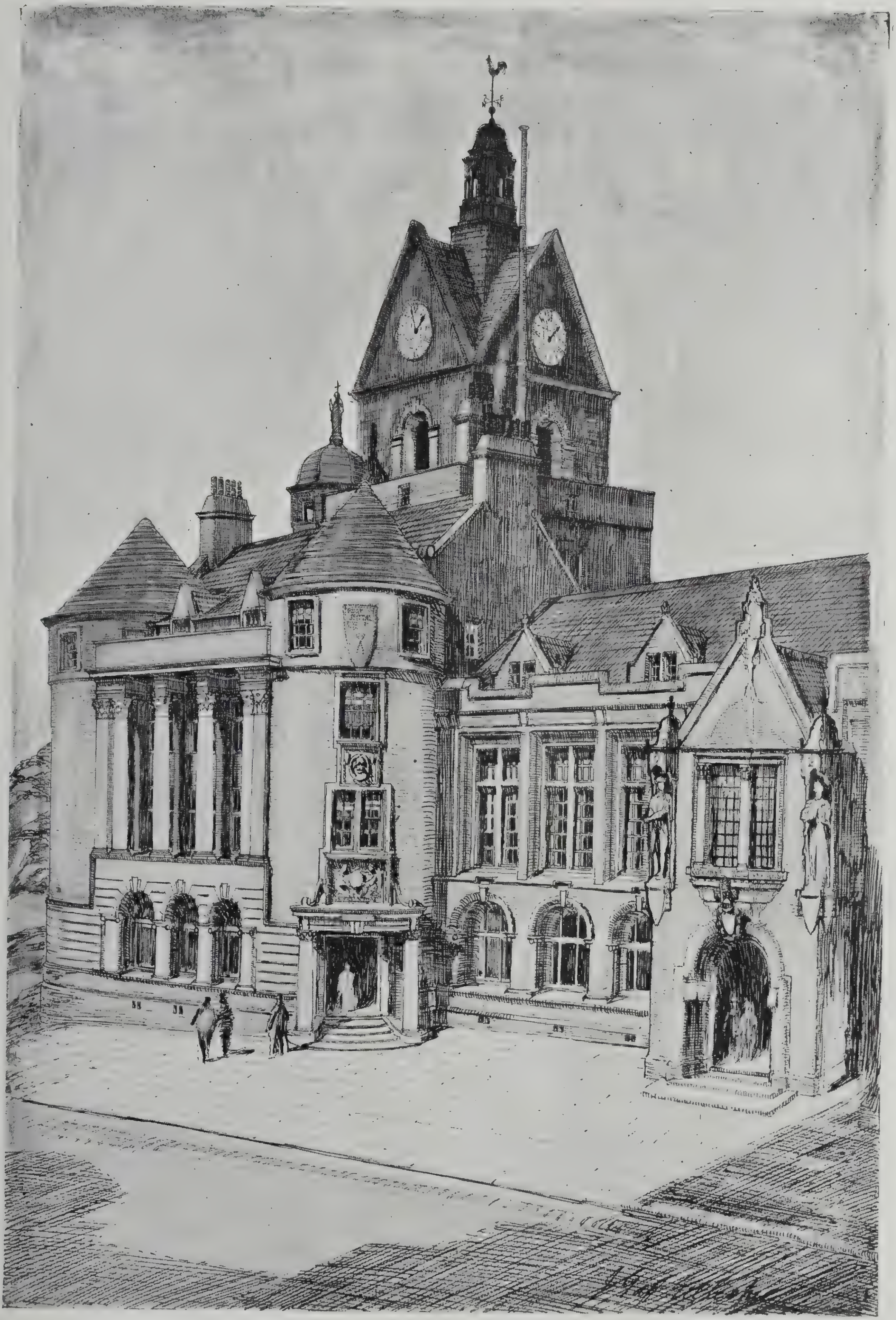

CURRENT ARCHITECTURE (SERIES IV.). XXVIII.—MUNICIPAL BUILDINGS, STIRLING.

J. GAFF GILLESPIE, ARCHITECT.

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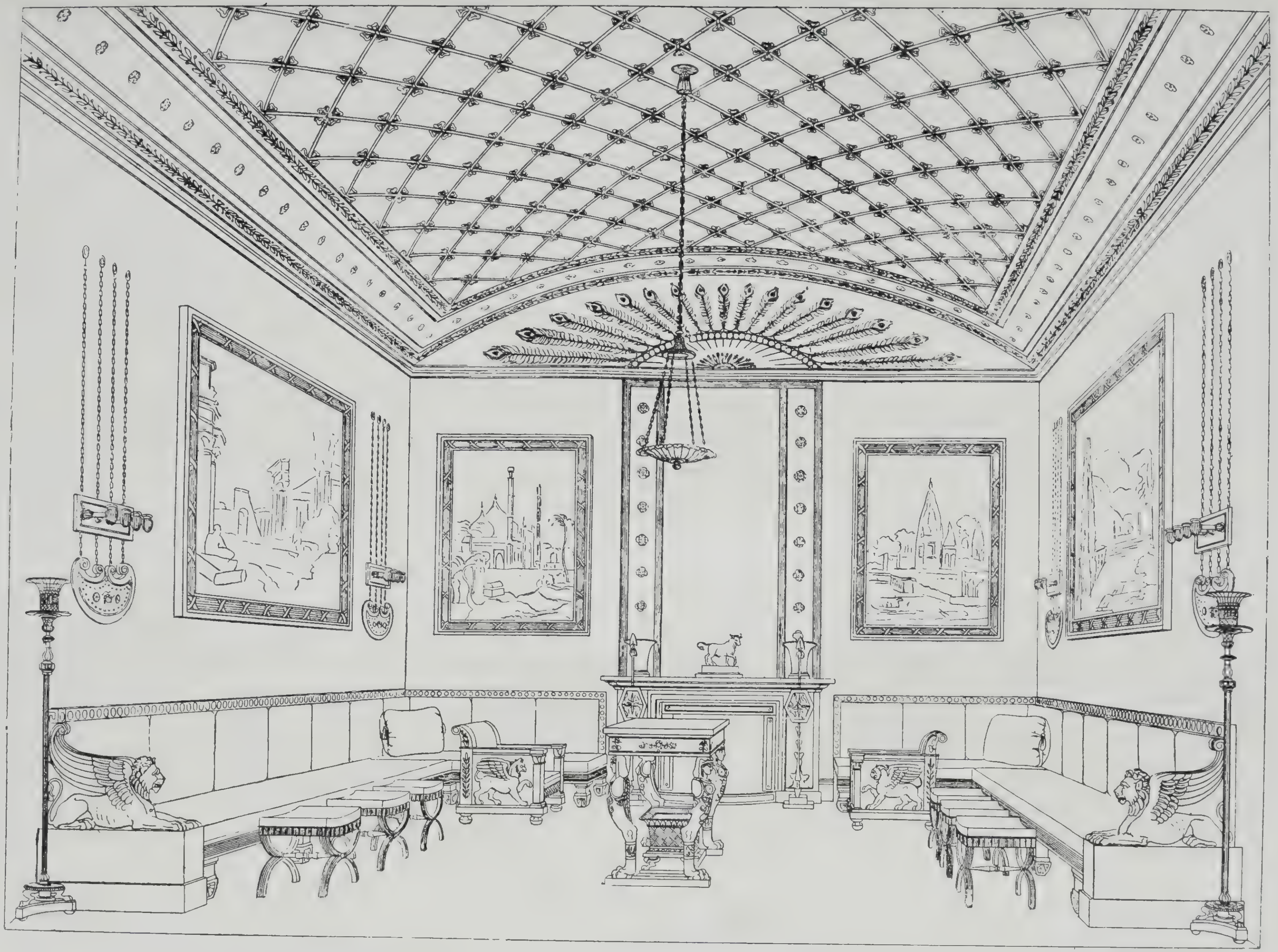

ARCHITECTURAL DRAWINGS AND SKETCHES. VII.—DESIGN FOR A DRAWING-ROOM.

BY THOMAS HOPE.

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THE ARCHITECTS' AND BUILDERS' JOURNAL.

JULY 25, 1917. *TOTHILL STREET, WESTMINSTER.* VOLUME 46. No. 1177.

WHY do we tax houses? The question is asked in a letter to the "Glasgow Herald," and the correspondent himself supplies the answer: We do not tax buildings because we want to dis- urage the building trade and discourage the ıployment of architects, masons, joiners, and all ose engaged in the trade. The chief reason why allow the rate on houses to depress and discourage ilding is because we permit a bad system to ntinue, and secondly, because we allow those who n the available land to keep the land out of use til the price is far beyond the 'natural monopoly ice' the land could command by its position." He otes the Royal Commission (1885) on the Housing the Working Classes as recommending that a rate four per cent. on the selling value of the land uld be a direct incentive to part with it to those o wish to build. Hence, said the Commissioners, wofold advantage would arise—first, an increased ntribution to the rates, and, secondly, competition ong sellers would bring down the price of the d. It may be so; but more recent adven- res in the taxation of land values do not eate much confidence in the efficacy of trans- rring taxation (or any portion of it) from e house to the land; and, with stupendous r-bills to be met, the prospects of relief from e payment of any sort of taxation are rather note. There is, however, just a gleam of hope that en, under financial stress, the whole system is ing overhauled, opportunities for readjustment y occur, and the burden on building may be htened.

* * * *

Unhappily, questions of ownership and tenure ve been hitherto debated as political party ques- ns, and the addition of an extraordinarily stiff se of crass class prejudice, aristocratic and demo- tic, has clouded and embittered the issue until the als forgot the origin of the quarrel. This oblivion s perhaps no great calamity, seeing that the blem is too complex to admit of solution on party es, or by the application of any such simple solvent the "single tax" proposed by Mr. Henry George. for the Finance Act, it has aroused an amount of position that is much greater in volume and is much re protracted than that with which fair legislation usually met; it would therefore seem that there is nething radically wrong with it. Very little profit m it has come to the Treasury, it has not had the ected effect of promoting wholesale the profitable ployment of idle land, and its prestige has been erely shaken by the legal interpretation in the msden case, wherein a builder was actually alised for building—or, what virtually comes to same thing—he was compelled to pay duty on the e of the building he put up. This effect of an Act which the object most loudly proclaimed was the motion of building was so ludicrous that adminis- tion of the clause upon which the decision was ed had to be suspended, but the outbreak of the r prevented the amendment of an Act that, as even opponents grudgingly admit, is excellent in parts. a whole it has done more harm than good—if not its direct incidence, then by its demoralising effect the minds of landowners, and by the consequent tability of the real-estate market. Capitalists urally declined to invest in land when the only certainty about the deal was that they were buying the privilege to pay a tax; for though this is a nearly general experience—one does it in buying a dog or a gun—it was a novelty in land purchase, and it has had (so we are constantly told) the disastrous effect of driving away much capital that would have been employed in the development of building estates. This is the sort of assertion that becomes true if only you keep on saying it; and in the present case the assertion is backed up by a confident statement that this withdrawal of capital had the immediate effect of initiating the housing crisis which from sundry other causes has now become acute.

* * * *

Another drawback to house-owning, and inferentially to house-building, is one that specially affects the small owner and that discourages thrift. Let us take a concrete case. A man of the clerk class buys, through a building society, the lease of a house assessed at £30 a year. On this assessment he pays £12 a year in rates (one hopes that the case is exceptional) and about £7 or £8 war-time house duty. Add to this £6 for ground rent, with £5 (a very low estimate) for upkeep, and £1 10s. for water-rate, and we get annual outgoings of £31 10s. for a house that could be rented at £30! Of course, on this showing he saves about the amount of his rates; but this profit is not an exceeding great reward for the pinching economy of the series of lean years during which he paid an interest on his loan. There may be examples that are better than this, and some that are much worse. If it is a typical case, it offers but a poor incentive to the years of self-denial which the acquirement of "a house of his own" involves for clerk or mechanic, and it lends emphasis to the Glasgow correspondent's audacious question, "Why tax houses?" What is chiefly wrong in this instance is obviously the large amount of the assessment, and a stringent inquiry into this particular point should form an important item in the programme of reform. Assessments of small property are made very much at haphazard, and bear most hardly on those persons who are least able to bear the burden—the smaller the house, the larger the ratio of the rates. This is an inveterate scandal, and may be here condemned the more disinterestedly because, unfortunately, the architect has little or nothing to do with the small house. But, as already said, the whole system wants overhauling very thoroughly. It is, as the Glasgow gentleman observes, the survival of an evil that has no better excuse than its inveteracy.

* * * *

Two familiar names in architecture have to be recorded in the obituary—Mr. David Barclay, F.R.I.B.A., of Glasgow, who has died at the age of seventy-one, and Mr. Howard Chatfeild Clarke, F.R.I.B.A., F.S.I., who has died, it is supposed, from the effects of overwork in connection with surveys and valuations made at the request of the Ministry of Munitions. Mr. Barclay became a Fellow of the Institute in 1899, Mr. Clarke in 1906. Each had built many schools (Mr. Barclay more than sixty) and public buildings, but whereas Mr. Clarke had devoted much time and study to "surveying"—he was surveyor to the Fishmongers' and Cordwainers' Companies, and to several of the leading insurance companies—Mr. Barclay applied himself mainly to architecture proper; and it may be said that the two men were of widely different types, Mr. Clarke representing the more utilitarian and Mr. Barclay the more artistic temperament. He was the son of a sculptor, and Mr. Clarke was the son of an architect who also had cultivated intensively the business side of the profession. Mr. Clarke's best-known work is the Cordwainers' Hall in Cannon Street, and Mr. Barclay's the Royal Technical College in George Street, Glasgow, which cost about £400,000. Mr. Clarke was president of the Surveyors' Institution in 1914-15, and Mr. Barclay had served on the Council of the R.I.B.A., was president of the Glasgow Institute of Architects from 1808 to 1900, vice-president of the Glasgow Art Club (twice), a governor of the Glasgow School of Art, and a member of the Royal Glasgow Institute of the Fine Arts. Mr. Clarke was in much request as an expert witness in rights of light and air cases, and went into the matter so thoroughly as to put up a large screen to demonstrate the effect of a threatened deprivation of light. Evidently there are few points of contact between the two men, the comparison broadening into contrast; but each was a man of mark in his own line, and both will be sorely missed.

* * * *

To-day (July 25) the half-yearly general meeting of the National Federation of Building Trades Employers of Great Britain and Ireland is being held, at the Midland Adelphi Hotel, Lime Street, Liverpool, where the members will be welcomed by the Lord Mayor. As a rule "chorused Nature" mercifully intervenes to give a summer meeting more or less of a holiday character; but this time the agenda rather discounts the mood for junketing. There are the form of sub-contract, the reports of the Housing Committee and of the Reconstruction Sub-Committee, and the Courts (Emergency Powers) Bill report to be considered; but these are trifles compared with the proposal for a Builders' National Industrial Parliament, a subject that may not be lightly dismissed. It will, no doubt, be thoroughly threshed out, because builders know the virtue of a good foundation, and because in initiating this movement, the Federation is assuming a responsibility which reaches, or may reach, far beyond its own borders. It is an occasion for the fullest exercise of the sagacity, prudence, foresight, and courage for which the Federation is already held in high respect, and these qualities will not fail it in so crucial a trial. One great reason why the Federation is respected is because of its uncommonly liberal spirit. Purely judicial views of industrial problems can hardly be expected from an organisation erected with the express object of serving the interests either of employers or of workpeople; but the Federation is, by its very constitution, removed at least a step from the arena of fiercest fighting. Hence its annals reveal the persistency of reason and moderation, as if a bland spirit of healing had cast out a demon that delighted to wound. This is a good work of which any organisation may be justly proud, and the Builders' Parliament is the next step in advance.

* * * *

This afternoon members of the Federation will visit St. George's Hall, which some good architectural critics have not hesitated to acclaim as the noblest of modern buildings, and of which Mr. Norman Shaw has written: "I have been all over the Continent, and I have seen nothing finer in its way than St. George's Hall, if as fine. Its simplicity makes it all the more impressive, and, whilst striking to the eye, the design is full of refinement, and in it we have a building for all time, one of the great edifices of the world." It was begun in 1841, and finished in 1854, Cockerell completing what Harvey Lonsdale Elmes had begun. It is built of Derbyshire sandstone, and its greatest length is 500 ft., while its Great Hall is 169 ft. by 74 ft. The cost was about £330,000. On Thursday the Federation visits will include Liverpool Cathedral, at the invitation of the contractors, Messrs. Morrison and Sons, of Wavertree; and Port Sunlight model village and the works of Messrs. Lever Bros., Ltd., where Lord Leverhulme will receive the visitors and entertain them to tea. The Adelphi Hotel, which the Federation are making their headquarters, is so sumptuously furnished and decorated as to shake the faith of Americans that they own all the "finest hotels in the world." It astounded even a seasoned connoisseur like Mr. W. D. Howells, who, in one of his articles in "Harper's," refers to it quite enviously.

* * * *

Basements as "funkholes" during air-raids have been generally condemned in the correspondence which has followed the latest visitation. Scotland Yard contributes the advice that a cellar having a good concrete roof and a solid building above may be considered bomb-proof, but that a cellar under a comparatively small house with wooden floors and ceilings is by no means a safe place of refuge. It i added that with large blocks of flats or offices the case is different, as an aeroplane bomb, which is necessarily less formidable than a Zeppelin bomb, is hardly likely to go through more than two concrete floors Apparently, therefore, the safest room in such buildings is somewhere below the second floor from th roof, while the safest place in the room is near th walls, and the safest part of the wall is near the fireplace, where the occupants should lie down fla Messrs. Trehearne and Norman, the architects of man high buildings, state that they know of no instance i which reinforced-concrete floors have been penetrate by fragments of a bomb. It is conceivable, howeve they add, that a roof, being somewhat lighter in construction, might not be proof against a direct hit. "A a bomb explodes in the form of a fan, it is clear tha in an explosion at ground-level fragments may fl almost horizontally from one end to the other of ground floor and do an immense amount of destructio whereas an upper floor, being partly protected by i steel-and-concrete floor, is immune save from fragments flying through the windows in an upwar direction. This makes the ground floor far and awa the most dangerous part of the building, particular as the window spaces are usually far larger than in th upper floors." Their conclusion is, therefore, that it far better for the occupants of all floors except th ground floor to remain on their respective floors, as f as possible from windows and exits and staircase And so the ancient tag, *In medio tutissimus*, has i most modern vindication.

* * * *

There are, of course, exceptions to this rule. Son of them are indicated in the preceding paragrap Possibly, therefore, the Dean and Chapter of St. Pau are justified of their wisdom, as most certainly they a of their humane hospitality, in throwing open to th public the crypt of St. Paul's Cathedral as a refu from raids. It is believed that the crypt will hold abo twenty thousand persons, and that they would be sa from direct hits from bombs. Their safety in oth respects, however, seems questionable; and it cann be supposed that the cathedral authorities would ev allow, in any circumstances, the crypt to be occupied anything near the full extent of its capacity. T results of a panic-stricken rush to the very inadequa exits, for example, are horrible to imagine; but doubt all the possibilities have been taken into accou both by the cathedral authorities and by the Lo Mayor, who offers similar hospitality in the Guildh crypt.

THE PLATES.

The Basilica of Constantine, Rome.

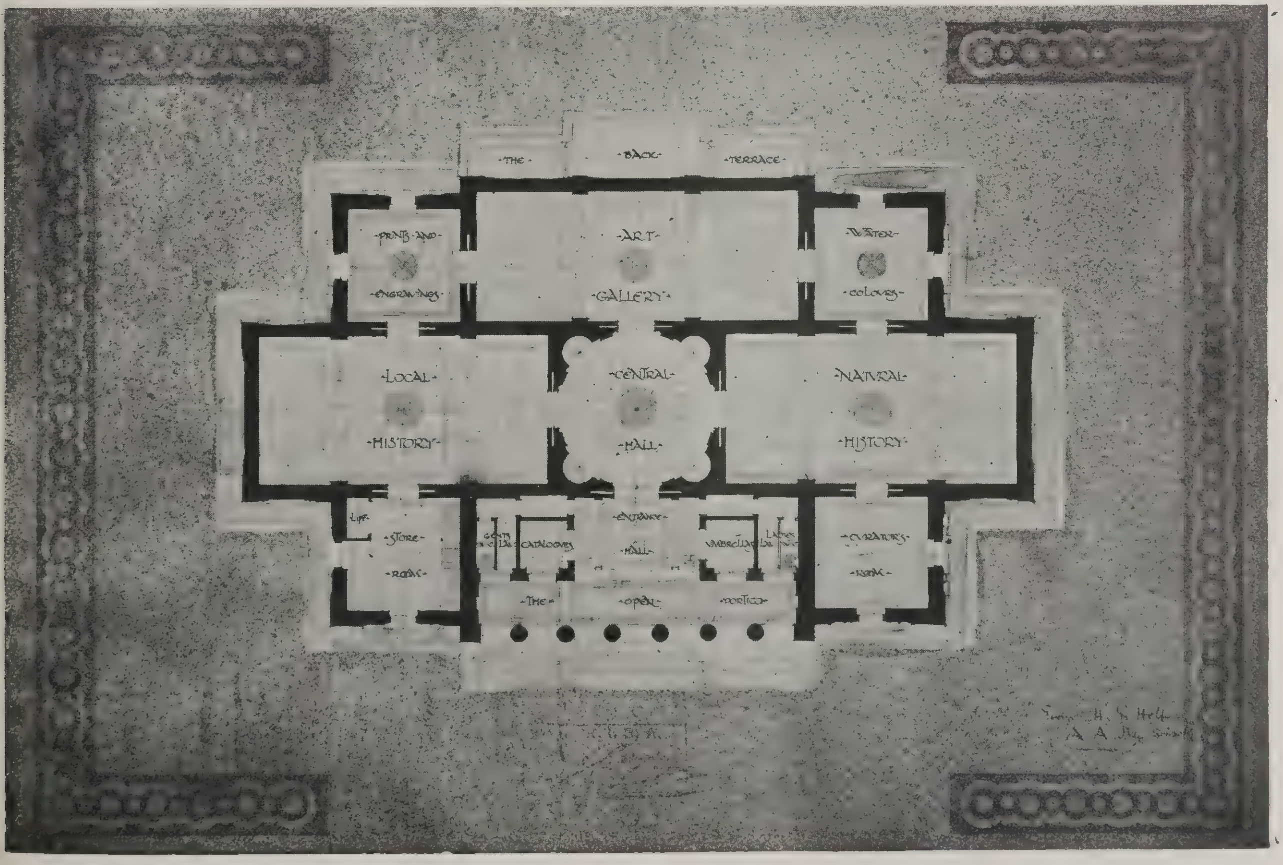
THIS is one of a series of fine "restorations" of Roman and Egyptian buildings which Mr. W. Walcot has limned, and although it is less elaborately wrought than some others of the set, it is certainly one of the best. In it Mr. Walcot has shadowed forth the character of the Romans as expressed in their architecture, which always reflects the strength, majesty, severity, and logicality which made them the world's great law-givers. With as much of imaginative insight as of artistic skill of hand and of architectural knowledge, Mr. Walcot visualises these qualities with a sure hand, and with a vividness seldom if ever excelled. It is believed that the drawing shows the basilica as it probably appeared at about the close of the sixth century A.D. The existing ruins are the remains of the basilica erected by Maxentius, and completed and partly rebuilt by Constantine the Great. Of the vast vaulted arches spanning the middle space, only the supports from which the arches sprang still exist. The basilica was 270 ft. long by 82 ft. wide, and the roof was supported by eight columns. Whether it was ever used as a place of Christian worship, as Mr. Walcot depicts it, is questionable, but the point is quite immaterial—or, rather, it is only material in so far as it has enabled the artist to invest his picture with a human interest that decidedly lends a grace to impressive composition.

Thomas Hope's Empire Style Designs.

In the note on Hope given in last week's issue in dealing with the drawing-room which he designed for the reception of four pictures of Indian scenery, his friendship with and indebtedness to Percier were mentioned. It was Percier who, in association with Pierre Fontaine, established the so-called "Empire style." Charles Percier, who was born in 1764 and died in 1838, was a fellow-pupil with Fontaine in the atelier of Antoine François Peyre, and Percier and Fontaine became as David and Jonathan, or—in respect that you cannot separate them in thought—Damon and Pythias. In 1786 Percier won the Grand Prix de Rome in Architecture. During the Revolution, architecture languishing—one cannot be quite sure whether its professors were, for this one moment in history, suspected of being aristocrats—Percier supported himself by designing furniture and decorations, introducing the ancient modes of Rome and Pompeii, and thus originating the Empire style. Hope was no mere copyist; but his derivation from Percier (which he frankly and warmly acknowledged) is obvious in almost everything he did; and this plate of designs in the Empire style proves the success with which he tapped Percier's sources of inspiration. What is particularly striking in these designs is the modern spirit in which antique *motifs* have been interpreted. Beyond that, an exquisite sense of scale and proportion, delicate refinement of detail, and a wonderful grace of curve, show the hand of an indubitable master.

Museum for a Country Town.

These drawings—the plate, and the plan shown below—were made by Mr. George H. G. Holt while he was a student at the Architectural Association Day School in 1914 (before, on war breaking out, he joined the colours), and was submitted by him for the Final Examination. It is, on the whole, a very pleasing design, but, as a matter of personal taste, we should prefer to keep the balustrading quite



A MUSEUM IN A COUNTRY TOWN: PLAN. BY GEORGE H. G. HOLT.

(For Elevation, see Supplementary Plate.)

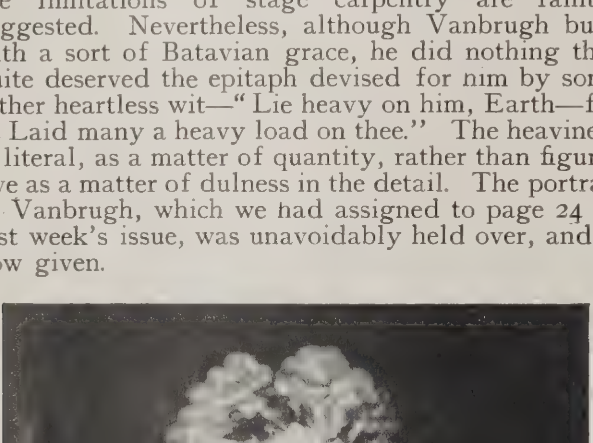
plain. And would not the sculpture inside the portico stand a rather poor chance of being seen to advantage?

Details of Portico, New York City Hall.

This working drawing affords, in its subject, a fairly typical instance of the American manner of handling classical details—that is, with the freedom and assurance which come of mastery. With the Americans, that freedom seldom degenerates into licence, which would falsify the spirit which the artist seeks to embody in forms that, in their modification, reflect also the individuality of the adaptor. Our illustration is reproduced by courtesy of the "Architectural Forum."

Blenheim Palace: Detail of South-East Front.

This portion of the great palace, of which as a whole a description was given last week, when two general views formed the subject of one of the plates, has sufficient merit to support the saying that Vanbrugh composed his buildings as he did his plays—to be observed and enjoyed separately as acts and scenes, rather than in unbroken sequence and in a general perspective view. There is, indeed, something stagy in the composition. The portico is a little pinched, as if the artist were fearful of occupying too much of the width of his stage, of which width he was further trying to make the most by splaying his "wings"! This, of course, is a fanciful conjecture, on *post hoc, ergo propter hoc* principles; but the suggestion of theatrical intent and of theatrical exigency certainly haunts Vanbrugh's work. Here the meanness of his terrace and of his stairs is hardly compatible with the grand manner; and here again the limitations of stage carpentry are faintly suggested. Nevertheless, although Vanbrugh built with a sort of Batavian grace, he did nothing that quite deserved the epitaph devised for him by some rather heartless wit—"Lie heavy on him, Earth—for he Laid many a heavy load on thee." The heaviness is literal, as a matter of quantity, rather than figurative as a matter of dulness in the detail. The portrait of Vanbrugh, which we had assigned to page 24 of last week's issue, was unavoidably held over, and is now given.



THE STORY OF LONDON BRIDGE.

BY W. D. CARÖE, M.A., F.S.A., F.R.I.B.A.

WE must perforce hasten unduly over the lo history of London Bridge, so rich, so teemi in incident that it would need several su lectures to do it justice. Those who are prompted a deeper study will find it admirably set forth in M Welsh's book, where full justice is also done to t Tower Bridge.

LONDON BRIDGE (Peter of Colechurch, 1176-1209)

Of the form of the first, a wooden bridge, no reco subsists. Erected in 993 by monks of St. Ma Overie, Snorro Sturlesen, the Icelandic chronicl tells us that it was held by the Danes and attacked King Ethelred, with Saint Olaf of Norway as his al Olaf is stated to have sailed up the Thames a destroyed the bridge in 1008. His memory is still wi us in Tooley Street—St. Olaf Street. The bridge w rebuilt and again destroyed, Rufus the King interes ing himself in its reinstatement. The next bridge w according to Stow, also of wood, but was part destroyed by fire in 1136 and repaired in 1163 as temporary measure by a citizen too little known a honoured by London, Peter, the priest of St. Ma Colechurch, pending only his erection of the fi stone bridge, begun in 1176, finished in 1209. It h twenty arches, with massive piers, of which one of t pier foundations, called the starlings, stretched out less than 115 ft. in total length. The bridge was 926 long, only 15 ft. wide, and 60 ft. high, the greatest ar span 32 ft. The total waterway was, however, on 194 ft. On the eastern side of the long centre starli Peter erected at his own cost a chapel, and dedicat it to St. Thomas à Becket, who had been baptised at Mary Colechurch, and was one of the then very lat additions to the calendar of saints. His tragic dea had taken place only in 1170 and his memory was fres We may be reminded that July 7 is the date of t Feast of the Translation of St. Thomas, the great d for our bridge chapels. Peter was himself the fi official Warden of the Bridge, appropriately enoug the Wardenship becoming afterwards an importa City office.

The history of the Bridge House Trust is outsi our scope, although closely associated with that of t bridge itself. It had its headquarters in Tooley Stre The first record of bridge property is in 1122, when was in clerical hands. It seems to have been a prosperous and well-managed undertaking from the outset.

From a document of Henry III. we learn th already there were dwellings upon the bridge. erect such was one of those obvious and straig forward expedients peculiar to the mediævalists. T City was enclosed by walls and wanted to expan There were the vacant starlings of the bridge. W not use them? All difficulties of sanitation, whi were peculiarly harassing in growing mediæval tow were solved. Paris did likewise. The five bridg from the Ile de la Cité were packed with wood structures, "clinging like marten boxes to the bridg so as almost to hide the water; damp, decayed, ha sinister, the back windows convenient enough to dr a corpse into the black water below." The houses London Bridge were, curiously enough, large occupied by the pinmakers of London.

In 1320 an edict of vast import was enacted, whi may come home to us in these days of prohibitio The sale of beer upon London Bridge was prohibite Were the parapets of the drawbridge not high enoug we ask?

In 1426 Traitors' Tower at the north end of t northern drawbridge was erected. The passage of t rawbridge was always dangerous, and many accidents curred, despite the prohibition of 1320.

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* Portion of a lecture on "London Bridges." For introduction, page 26, July 18.

In 1548-9 comes the ominous entry. "That Mr. ylford and Mr. Judde, surveyors of the works of the ydge shall tomorowe begin to cause the chapell on the same brydge to be defaced, and to be trans-ted into a dwelling-house, with as moche spede as ey convenyentlye maye."

Thus was the chapel converted to a dwelling-house st, to be subsequently further degraded into a store-use.

In 1577 the North Tower was removed and a new ame house built in its stead. Subsequently the uth Tower was called Traitors' Gate.

We must not omit to mention entries in the accounts r statues added to the bridge, showing the intimate nnection between sculpture and architecture on our idges in those days. SS. Peter, Paul, Michael, and eorge had their places "in howsinges," i.e., in niches; so St. Thomas à Becket and St. Catherine, the last in nour of Henry VIII.'s first queen.

In 1578 Nonsuch House was erected between venth and eighth arches from the north end, and gave name to Nonsuch Loch. It was made in Holland d put together with oak pins, no iron being used. It rms a prominent object in the old views, and pro-cted well out on to the starlings. The going way of e bridge being only 15 ft., it follows that the ojections and even the starling on the town river side re freely used to carry the houses.

Nonsuch House must of course not be confused with enry VIII.'s fairy palace of the same name.

In 1582 the first water works were erected at the rth end by Peter Moris, a Dutchman, the water power the south end being employed shortly after to turn ree corn mills.

In 1632 a great fire devastated part of the City and nsumed forty houses on the bridge, but the fire did t reach to the centre, whereby we learn how closely e houses were packed together.

In 1645-6 the houses were replaced and the roadway dened. Of the partial rebuilding of 1645 it is worth oting Stow:—

"The building was of timber, very substantial and autiful, for the houses were three storeys high, sides the cellars, which were within and between the ers; and over the houses were stately platforms ded, with rails and ballusters about them, very mmodious and pleasant for walking and enjoying so e a prospect up and down the river, and some had etty little gardens with arbours." Who would not ve wished to be a pinmaker in those days?

This pleasant work had but a short life, for only enty years after—in 1666—came the greatest of all ndon fires, by which the north end of the bridge was ain swept away and damage done to the masonry to tune of about £25,000 of our money.

In 1671 a new range of houses four storeys high was cted, and the houses at the south end were molished to continue the uniformity across. The dway was now widened to 20 ft., and here we bid ewell to Nonsuch, ninety-three years old, but the apel, though now used only as a dwelling, and aitors' Gate still bravely held on. In 1725 fire stroyed the latter, and with the gate there died the rbarous custom of exposing the traitors' heads to the blic gaze. In 1728 a stone gateway was erected. In 54 the engineer first comes upon the scene, but can rdly be said to have equipped himself with glory. to him is really due the demise of this historical nument.

Under Labelye, the Swiss engineer of the new estminster Bridge just completed, and Dance, the y architect, the bridge was widened in stone on both es, and reopened in 1759, over £100,000 having en spent upon it. The removal of the central pier eased naturally the waters and created such a scour that the adjoining piers were soon in jeopardy. Smeaton, then at the height of his fame, was called in, and the stones of the City gates then under demolition were thrown in upon the starlings. It was the beginning of the end. The old fabric which had stood so firmly for eight centuries could not withstand these new conditions. The accelerated stream kept washing away the foundations, the annual upkeep of which is said to have cost the Bridge Trust some £20,000 a year of our money. The danger of shooting the rapids was a constant source of complaint on the part of wharfingers and lightermen, for with the opening out of the centre the locks were no longer in use.

In 1822, as a first step, the water works were removed, and projects set on foot for the abandonment of the ancient fabric which had served the City so well.

Edward Cooke, in glorifying Rennie's new structure, completed in 1833, writes this undeserved epitaph over the dying Procris: "The manner in which the bridge was constructed reflects little credit upon its architect," a slander which he unconsciously qualifies a few paragraphs further on, thus: "The old bridge had existed, notwithstanding its many defects, for 800 years." Not only had it withstood fire and water, ice and tempest, not only had it been the safe passage way of millions of citizens from the highest to the lowest in the land, but it had been the actual home of generation after generation. Of the many dwellers upon it perhaps Hans Holbein was one of the most distinguished. We may fitly write its epitaph in these kindly words: "May the new bridge stand as long." It is well to recall the joy and pride of the citizens in their bridge by recording the ancient custom of decorating its gates with leafy boughs and garlands on Midsummer Day.

[Mr. Caröe here exhibited some views of old London Bridge and its successor, designed by John Rennie, carried out by his son, and opened in 1831.]

In 1900 the need for widening the bridge had become urgent, the congestion beyond reason. Here, indeed, was an opportunity for courage. King William Street had the makings of an approach to the City without rival, such as the City of the Empire deserved and does not possess. But the war had not then come to teach us courage in finance. If the City had seized its golden opportunity (golden in more ways than one) the monumental reconstruction of King William Street and London Bridge would have repaid the City in usurer's interest. The south side of King William Street might have been set back so as better to free St. Magnus Church and the Monument, opening out these features from Gracechurch and King William Streets.

The bridge might have been widened eastward to double its width or more, and thus Rennie's great design need never have been mauled.

But our City Fathers lacked courage or initiative. The scheme was adopted of throwing out cantilevers from the side of the bridge to carry the footwalks and a pierced parapet substituted for Rennie's simple and solid one, a weak scheme showing a good deal of science but no art. The traffic was inadequately relieved, while Rennie's conception was seriously degraded. The simplicity and balance of parts, upon which it primarily depended, were sacrificed. King William Street has since been partially reconstructed in the piecemeal fashion dear to the heart of the Britisher. It remains and I suppose will continue a second-rate thoroughfare.

[Mr. Caröe, in the remainder of his paper, deals with the bridges in the order in which they span the river, and incidentally he reviews some of the schemes for doing more justice to Father Thames in the matter of its margins as well as its bridges. Of these schemes, Mr. Caröe's own is by no means the least interesting, and this he describes in some detail. We hope to be able to give a further portion of the paper next week.]

(*To be continued.*)

NEWS ITEMS.

Converting Houses into Flats.

There are a number of large houses in Sheffield which have been empty for months—some of them for years. While there is a tremendous demand for housing accommodation any empty dwelling is wrong in principle and bad in practice, and it is suggested by a correspondent of a Sheffield newspaper that, with but slight expenditure compared with the original outlay, many of these houses could easily be converted into flats, and, as such, would let readily. It would, to some extent, relieve the pressure on the smaller property and be a paying proposition for the owner.

Building Trades Central Advisory Committee.

The Building Trades Central Advisory Committee (Operatives), which advises and assists the Ministry of Labour on matters affecting workmen in connection with the Employment Exchanges, at their fifth meeting, Mr. C. F. Rey (Director of the Employment Department) presiding, were informed that an arrangement had been made whereby workpeople sent through Employment Exchanges to work of national importance should travel at specially reduced rates. They also considered the scheme of apprenticeship in the building trade, which was recommended by a conference (convened by the London Central Advisory Committee for Juvenile Employment) of representatives of the Institute of Builders and of the London Building Trades Unions.

New Library for Exeter.

The scheme for a new library at Exeter is now making headway—at any rate to the extent of a definite decision being arrived at where the library is to be erected. At first the idea was to build the library at the junction of Paul Street and Queen Street, in connection with the plan for widening Paul Street, but as that project is hung up owing to the war the Royal Albert Memorial Governors, acting through the Library Committee, have been given time for reflection, and have made up their minds that the best site is in the grounds of Rougemont House. The proposal had to take shape soon or Exeter would forfeit, by lapse of time, one Carnegie bequest, by which the entire cost of the building is to be defrayed, the city finding the site. The site finally chosen is the best that can be obtained in Exeter. It is central, quiet, and capable of easy approach. The citizens are expecting to hear soon to what stage exactly the scheme has now been carried, and when it is likely that building operations will commence. So long as the war lasts the builders cannot begin on it, but there is no reason why everything should not be in readiness.

Simplification of Land Purchase.

Councillor Edward Jones, J.P., Bargoed, presided at a meeting of the Gelligaer Council on July 3, when a letter was read from the Aberdare Council enclosing a resolution that, in view of the seriousness of the housing problem, an appeal should be made to the Government to pass legislation which would enable local authorities to acquire land for building purposes on more reasonable terms. The Clerk (Mr. F. T. James) said he thought the resolution hardly went far enough. Speaking as a public official of thirty years' experience, and mindful of the difficulty and delay connected with the acquisition of land, his view was that local authorities should be empowered to take compulsorily any land in their area required for public purposes, and that so far as the price was concerned that should be fixed by the Government district valuer. Mr. James agreed with Councillor Sidney Jones that his object was to effect a simplification of the process by which land could be acquired, and an acceleration of the movements of local authorities to get it at a reasonable price. It was decided to communicate with the Aberdare Council informing them that the Council had adopted their resolution with an addendum, and asking them to revise the resolution by embodying in it Mr. F. T. James's suggestion.

R.I.B.A. FINAL EXAMINATIONS: ALTERNATIVE PROBLEMS IN DESIGN.

Instructions to Candidates.

1. The drawings, which should preferably be on uniform sheets of paper of not less than Imperial size, must be sent to the Secretary of the Board of Architectural Education, Royal Institute of British Architects, 9, Conduit Street, W., on or before the dates specified below.

2. Each set of drawings must be signed by the author, and his full name and address, and the name of the school, if any, in which the drawings have been prepared, must be attached thereto.

3. All designs, whether done in a school or not, must be accompanied by a declaration from the student that the design is his own work and that the drawings have been wholly executed by him. In the preparation of the design the student may profit by advice.

4. Drawings for subjects (*a*) are to have the shadows projected at an angle of 45 deg. in line, monochrome, or colour. Drawings in subjects (*b*) are to be finished as working drawings. Lettering on all drawings must be of a clear, scholarly, and unaffected character.

Subject XXXIV.

(*a*) or (*b*) A billiard-room, 30 ft. long by 20 ft. wide, with fireplace at one end and large bay window at one side.

Drawings.—Plan and two sections to half-inch scale, and details full size; one section to show scheme of colour.

(*a*) or (*b*) A Linendraper's Shop and Showrooms over four storeys above pavement, having a frontage to 60 ft. to a main thoroughfare and a depth of 60 ft. It has a return frontage to side street.

Drawings.—Front elevation, section, and two plans to ⅛-in. scale; detail of entrance or principal staircase to half-inch scale.

Subject XXXV.

(*a*) or (*b*) A Permanent Hostel for 25 Women Welfare Workers.

Site.—The site is practically level, has a frontage of 200 ft. and a depth of 400 ft., and is on the south side of a main road running due east and west in a pleasant suburb of an English manufacturing city. The building line is 20 ft. back from the road.

Accommodation, Etc.—The welfare workers are women who have had a university education, and are engaged in a factory working on the three-shift syste but with no Sunday work. Bedroo dining-room, drawing-room, and writi room are to be provided for the welf workers, sitting-room and bedroom for matron, bedrooms and servants' hall the kitchen staff, together with the nec sary bathrooms, kitchen, scullery, lard etc.

Materials.—The materials easily av able are red bricks and a hard sandsto which can only be obtained in thin bed

Drawings.—Block plan, 16 ft. to 1 showing general arrangement of buildi garden, etc. Plans of each floor, two vations, and a section to a scale of 8 ft. 1 in. Half-inch detail of part of entra front, with one or two full-size details masonry.

(*a*) or (*b*) Almshouses for the poor o site 100 ft. by 100 ft., facing the stree a country town, with buildings on e side of the frontage.

There must be no windows to the and west.

There must be accommodation for f teen inhabitants, consisting of sitti room, with cooking stove, scullery, co w.c., and one bedroom, and somewher the general plan a common reading-r and quarters for a single caretaker. buildings generally to be two storeys height.

Drawings.—One-eighth inch s plans, sections and elevations—2 she half-inch scale details—1 sheet.

Subject XXXVI.

(*a*) or (*b*) An Entrance Lodge to a ce tery. Accommodation required, living rooms, three bedrooms, and o for superintendent.

Drawings.—Two plans, a section two elevations all to ¼-in. scale. D of entrance to larger scale.

Small scale block plan required sho position of lodge in connection with ce tery entrance.

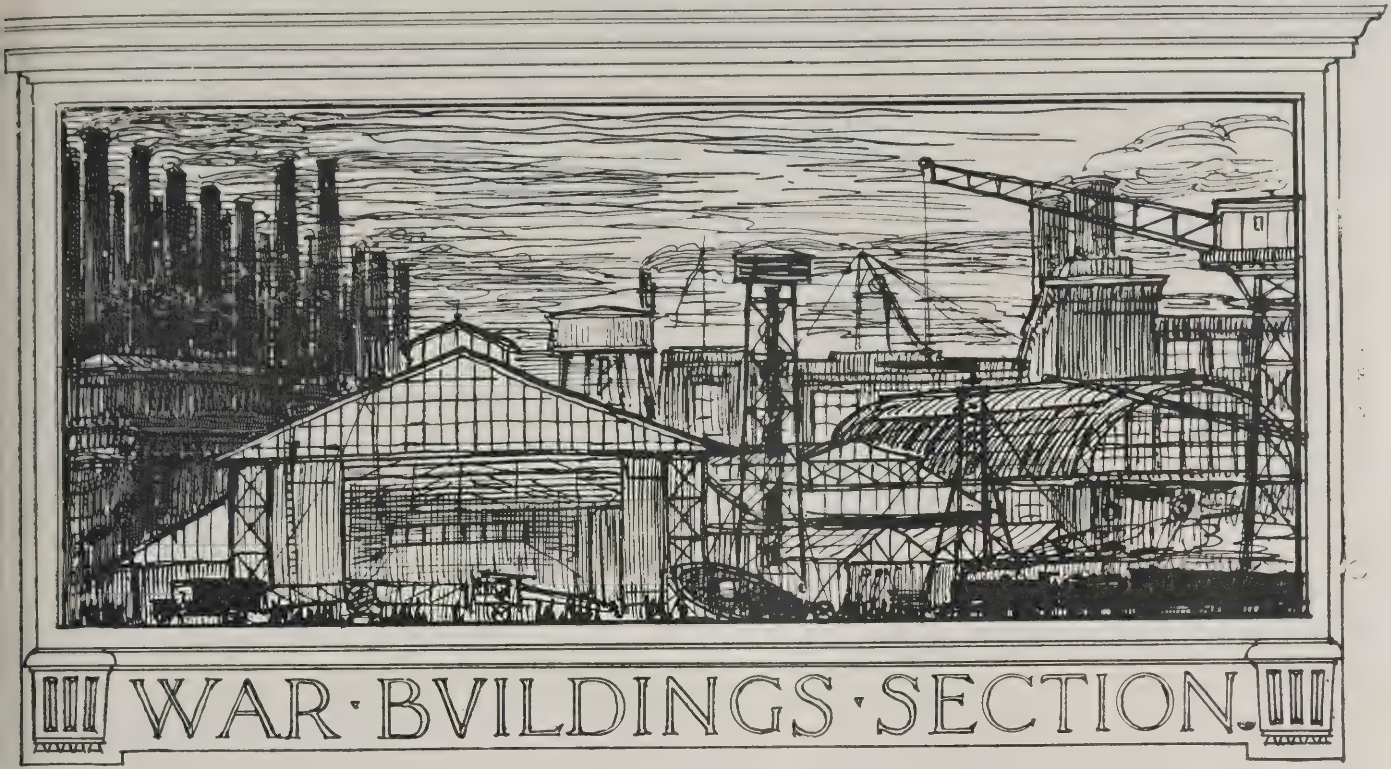
(*a*) or (*b*) Headquarters for O.T.C., large Public School.

Draft Condition.—The buildings, fo establishment of 400 infantry cadets, to form a detached group, sited on a plateau overlooking the playing fields, backed by wooded hills. The lay-ou to be on broad and dignified lines, an include a paved parade ground, a 7,500 yards super., colonnades, and tered areas. The following accomm tion should be provided: Drill c. 7,500 ft. super; two lecture-roo armoury, with cleaning-room and w shop, magazine, reference library, ga for maps and models, miniature ra orderly-room, offices for C.O., com commanders and quartermaster, s rooms for tools, equipment, and m rials; locker-rooms, shower-baths, Common rooms for officers, cadet N.C and cadets, office for sergeant-instruc and quarters for one married sergean

Drawings.—Plans, including la and key elevations to 1-32-in. scale. tions and elevation of main buildin ⅛-in. scale. A sheet of ½in. scale de

Dates for Submission of Designs
1917-18.

	Sub. XXXIV.	Sub. XXXV.	Sub. XX
United Kingdom	Aug. 31	Oct. 31	Dec.
Johannesburg	Oct. 31	Dec. 30	Feb.
Melbourne	Nov. 30	Jan. 31	Mar
Sydney	Nov. 30	Jan. 31	Mar
Toronto	Sept. 30	Nov. 30	Jan.


WAR·BVILDINGS·SECTION.

PREPARING FOR RECONSTRUCTION.

T the present time the air is full of ideas and suggestions for reconstruc- n after the war. Much of the discus- n is of a vague and academic kind, a oping round and reaching out for solu- ns. This is probably inevitable at the ginning of such a movement, for many the problems are unquestionably of a mplicated and subtle kind, and it takes me time before men's minds grip the ils of the subject and see precisely its actical implications.

A clearing house for these ideas and ggestions is obviously desirable, and the inistry of Munitions has therefore de- ded to set up a Ministry Reconstruction mmittee and a small Reconstruction partment for collating and studying the ports and recommendations on recon- uction made by the various departments the Ministry. In the June number of e "Ministry of Munitions Journal," the sistance of manufacturers is invited to lp with statements of the problems of eir own particular businesses.

The scheme is a promising and may be fruitful one. No doubt the Ministry ll be largely concerned with the recon- uction of the internal policy of the engi- ering trades, which is its special pro- nce; but there are allied problems of her trades which, if not coming within eir purview, are deserving of the con- deration of the Government's Central Re- nstruction Committee, or the Board of ade and the Local Government Board.

The building and contracting trades present normally one of the largest gregations of labour in the country. A eat amount of work has been done ring the past three years in the erec- n of factories and workshops, and indi- dual firms in these trades have been sy enough. But the aggregate of nor- al building activity has been greatly rtailed. The erection of house pro- rty, for example, has been completely a standstill, except in munition areas, d the arrears of domestic work to be overtaken are enormous and most urgent. The housing question before the war was receiving the attention of many borough and district councils, but for various reasons, and chiefly for want of a vigorous lead, practical measures were taken by only a few. We do not know what the Local Government Board may be doing in the matter, but the time is ripe for a co-ordinated effort to have a programme of construction thought out, and plans prepared, so that an orderly absorption of labour may be made possible immediately on the cessation of hostilities.

The national, municipal, and railway services have also been at a complete standstill so far as the maintenance of old and the construction of new works, not called for by the needs of the war, are concerned. Public bodies might, therefore, be encouraged to look round the corner and consider the schemes which must inevitably go forward on the restoration of peace. Much preliminary work is necessary before the actual work of construction begins. Plans must be prepared, and approved by the Government Departments concerned; and work of this kind could as readily be done now as after the war. Therefore schemes of new bridges, water supply, gas supply, sewerage, electric lighting, road making, harbour works, etc., might with advantage be brought forward to the point where all that remained was the placing of the contracts. There are firms of consulting engineers who are now relieved of the pressure of war work, and who could give their time and thought to this necessary preliminary work. And the result would be that when the boys come home they would have productive labour to get on with at once, and the process of demobilisation would be accelerated.

Beyond those post-war activities which come within the control of the Government departments, however, there will be a large and busy field of civil work. The past months have shown us that many manufacturers have their minds set on the construction of new and modern designed plants; but in an increasing number of instances permission to build at the present time is being refused, and no doubt properly refused, by the Ministry. It is apparent that if everyone waits until peace is declared, many months may be lost in the preparation of the necessary plans and schedules of quantities and the obtaining of tenders at that moment when returning workmen should be employed.

What we ("Kahncrete Engineering") predict is that the manufacturer who takes time by the forelock and instructs his architect or engineer to put on paper his completely thought-out scheme of new works will have an enormous advantage over his competitor.

When peace is declared there will be an immediate reaction from the inevitable depression of the war. An increased buoyancy of spirit will animate all business men; builders and contractors, feeling the incubus of war withdrawn, will be keen and competitive in their desire to obtain work, and prices and costs will be most advantageous from the owners' point of view. It is therefore only sound common sense which influences manufacturers to look into the matter of their post-war schemes immediately, and to be in a position to take advantage of the few months of transition between war and post-war conditions.

Some of the most important manufacturers in the country are at the present moment investigating the advantages of reinforced concrete Model Daylight Factories. Plans are being prepared for new motor works, new scientific instrument works, woollen mills, chemical works, paper works, etc. There can be no doubt that the firms who are pursuing this policy of looking round the corner will be amply rewarded in low costs of construction, rapid adaptation to the increased demand for civil output, and the establishment of goodwill.

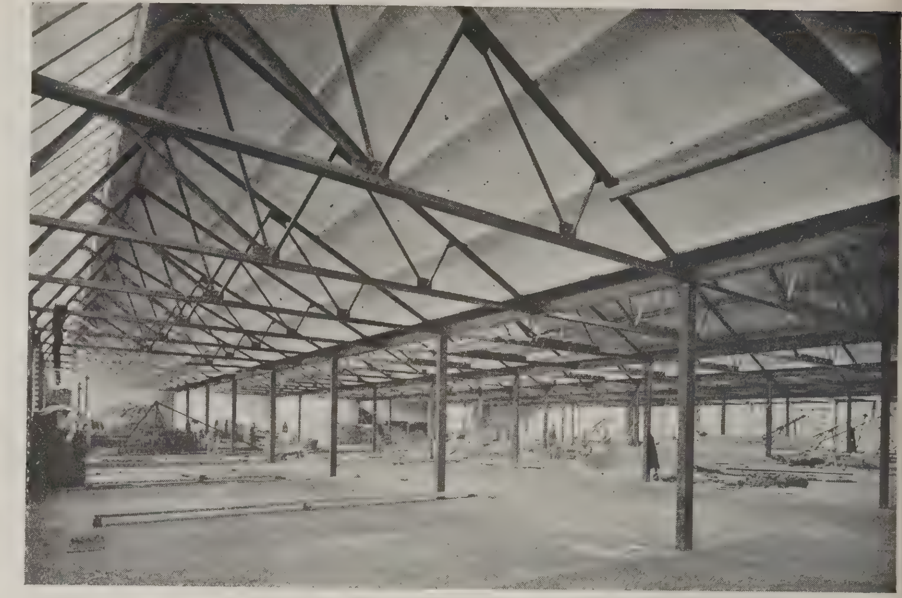
A MUNITION FACTORY.

The accompanying illustrations show a new munition works recently erected from the designs of Mr. A. Alban H. Scott. The front portion of the premises consists of two floors, the ground floor comprising the entrance rooms and the despatch department. The upper floor of the front building contains the offices and also special stores. The back portion of the premises consists of one floor only.

The general structure is steel columns and principals, with north-light roof covered with boarding, felt, and slates. The walls consist of brickwork and the floor is paved with metallic paving.

The spacing between the columns is 25 ft. by 20 ft., and the roofs are arranged so as to take the shafting, the height being convenient to give the necessary drive. The engine-room is arranged on the left-hand side, together with provision for heating boilers, etc.

These works are provided with a canteen, as shown on the plan (page 43), together with other special buildings, such as laboratories, etc. The whole works have been laid out with provision for convenient extensions to all departments.



A MUNITION FACTORY: GENERAL VIEW OF INTERIOR.

A BUILDER V.C.

Company Sergeant-Major Brooks, of the Oxford and Bucks Light Infantry, who has been awarded the V.C. for bravery in the field, was, before joining the Army in 1914, a workman in the employment of Messrs. Knowles and Son, builders, of Oxford and Headington. The act of valour for which Company Sergeant-Major Brooks was awarded his V.C. is thus officially described: "For most conspicuous bravery. This warrant officer, while taking part in a raid on the enemy's trenches, saw that the front wave was checked by an enemy machine-gun at close quarters. On his own initiative, and regardless of personal danger, he rushed forward from the second wave with the object of capturing the gun, killing one of the gunners with his revolver and bayoneting another. The remainder of the gun's crew then made off, leaving the gun in his possession. Company Sergeant-Major Brooks then turned the machine-gun on the retreating enemy, after which he carried it back into our lines. By his courage and initiative he undoubtedly prevented many casualties, and greatly added to the success of the operations."

A MEMORIAL PLAQUE COMPETITION.

"He Died for Freedom and Honour." Such is the inscription which has been decided upon for the bronze memorial plaque to be presented to the next-of-kin of members of our naval and military forces who have fallen in the war.

A competition for designs of the plaque has been opened, the chief points connected with which are:

The memorial to be as near as possib 18 square inches.

It may be a circle of $4\frac{3}{4}$ in. in diamete or a square of $4\frac{1}{4}$ in., or a rectangle 5 by 3 3-5 in.

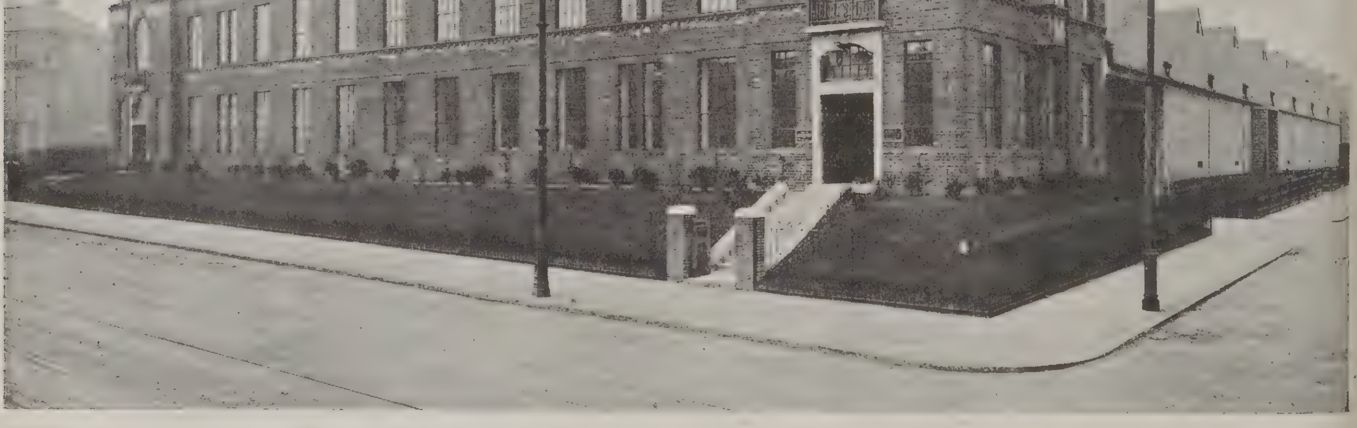
The design should comprehend a subje and a brief inscription. Some symbolic figure subject should be chosen. The i scription given above must form part the design.

A sum of £500 will be awarded in priz for a limited number of the most successf models. Should none of the models su mitted be of sufficient merit no prize wi be awarded.

All competitors must be British-bor subjects.

The models should be delivered to th Director, National Gallery, Trafalg Square, W.C.2, not later than November 1917.

Each plaque will be accompanied by scroll, the details of which are expected be settled shortly.



A MUNITION FACTORY. A. ALBAN H. SCOTT, ARCHITECT.

DUBLIN REBUILDING.

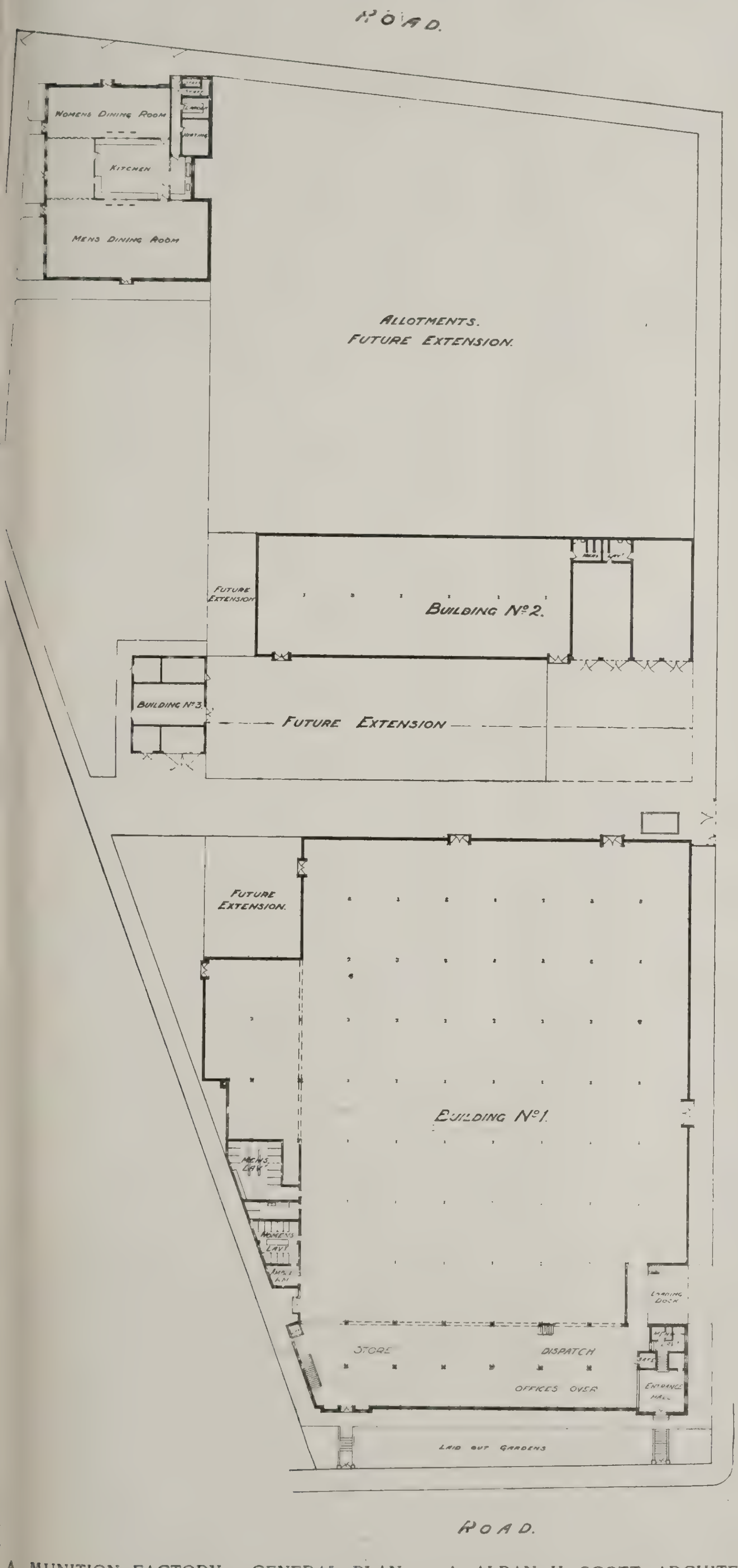
hortly after the unhappy events which olved the destruction of so many build- s about the centre of Dublin (says a ter in the "Irish Times"), the Captain the City Fire Brigade, who is experi- ed in such calculations, estimated the nage at two million pounds. Though the total amount of the *ex-gratia* grants made by the Government to pay for the damage has not transpired, it must be something very considerable indeed. It is not lack of money which has stood in the way of the progress of rebuilding, but lack of material, especially essential material, due to the multifarious demands of the war. Recently, however, the situation in this respect has improved, and the Government have followed up expressions of sympathy with the necessity for the re-building of business premises by a definite agreement to release the material required fundamentally in reconstruction, on the certificate of the City Architect as to the bona fide nature of requirements specified in particular cases where he had passed the plans. The extent of war demands has still its restrictive effects, and the ingenuity of architects, quantity surveyors, and contractors has been, and will be, taxed in the discovery and application of alternative methods and material in construction. Considerable success has already been achieved in this way, and is manifest in the buildings which have already been reconstructed. Reinforced concrete, for instance, has been adopted in several instances.

Another aspect of rebuilding calls for attention and serious thought on the part of the business men concerned, and that is the opportunity it gives not only for the newest methods of construction to be applied, but for a thorough modernising of the equipment of a building. Under that head may be mentioned floor-making and covering, wall-covering, lighting, heating, ventilating, the installation of private telephones, pneumatic tubes, and cash railways, filing cabinets, and office requisites.

With regard to the rebuilding, the widening of the field of selection for those who give the orders, and those who make plans to execute them, should be of advantage to all parties, and for the welfare of the city generally. The extent of Irish resources, and the proved skill of Irish architects, contractors, masons, and handicraft workers will be kept prominently in mind in this connection; and it may be said that quite a casual glimpse over that field reveals possibilities which are rather remarkable. One has only to take a glance at the buildings of Dublin, both of older days and those, such as the Royal College of Science and the National University, upon which work is now proceeding, for confirmation of Irish skill and Irish resources. In the immense work which is now making a definite start a great call will also have to be made upon the manufacturers of the sister isle for the supply of the numerous articles in the construction of which they have specialised.

The question of stone or brick for the facing of buildings to be erected in Sackville Street is by no means settled—that is to say, if the pressure of labour organisations concerned with the getting and preparation of stone is likely to be of any avail. Deputations to the Lord Mayor and to the Corporation urge with persistency the claims of stone. On the other hand, till recently the stone magnates, the quarry owners, seemed to be willing to allow their interests to go by default, expecting those who want stone to seek the whereabouts of quarries. That is not the way business is done nowadays: the proprietors of the most popular article cannot afford to allow its name to disappear from public notice for a month or hardly a week. However, the quarry-owners showed themselves willing to meet when arrangements were made for them, and the recent gathering under the auspices of the Dublin Industrial Development Association showed that they were ready to follow a lead, once given.

If Irish quarry-owners and material merchants fail to avail themselves of the usual means of publicity, they will have only themselves to blame if their commodities remain unused. Nowadays, advertisement is a primary condition of success.



A MUNITION FACTORY: GENERAL PLAN. A. ALBAN H. SCOTT, ARCHITECT.

(*See page 42.*)

OBITUARY.

Mr. Thomas Stewart.

Mr. Thomas Stewart, Glasgow, has died at his residence, Burnbrae, Helensburgh, after a long illness. In partnership with a brother, Mr. Stewart at one time carried out large building operations, principally on the south side of Glasgow. He continued in business on his own account till a few years ago. He also built a number of villas on the Upper John Street boundary of his own feu at Helensburgh. Mr. Stewart is survived by his wife, three daughters, and seven sons. His sons are all on service. Mr. Stewart was sixty-five years of age.

Mr. E. L. P. Duke.

Mr. Edgar L. P. Duke, builder and contractor, of Plymouth, who has died at the Royal Naval Hospital, Plymouth, was a brother of the Right Hon. H. E. Duke, K.C., M.P., Chief Secretary for Ireland and member for Exeter. Since the outbreak of war Mr. Duke had been engaged on Government service. On his return from Scotland, where he had been absent six months, he was taken ill, and he died from pneumonia after an illness of only ten days. Deceased was fifty-nine years of age, and leaves a widow and six children. One son is on national service and two others are in the Army.

Mr. David Barclay, F.R.I.B.A.

Mr. David Barclay, F.R.I.B.A., a leading architect in Glasgow, died at his residence, Laventille, Crow Road, Jordanhill, on July 13. A member of the firm of H. and B. Barclay, he was a native of the city. In collaboration with his brother he was the architect for the municipal buildings of Greenock and also for the Glasgow Academy buildings. As an architect of schools he undertook a wide range of work, the principal example of which, perhaps, is the huge building of the Royal Technical College in George Street, his plans for which were selected in competitive contest. A number of churches in the city and other public buildings were also designed by him. He was a Fellow of the Royal Institute of British Architects, past president of the Glasgow Institute of Architects, a governor of the Glasgow School of Art, a vice-president of Glasgow Art Club, and a member of the Royal Glasgow Institute of the Fine Arts. Mr. Barclay, who was over seventy years of age, was a member of the Incorporation of Masons, of which he was Deacon in 1901.

[See editorial note, and the note at the end of this section.]

Mr. James Allan.

The death took place at his residence, Park Place, Cardiff, of Mr. James Allan, builder and contractor. Born at Fochabers, in the county of Moray, N.B., in April, 1844, he was the son of Mr. Robert Allan, a farm holder. After serving his apprenticeship to a stonemason at Elgin, he went to Cardiff and entered the service of Mr. Easton Gibbs, contractor for the Rhymney Railway, with whom he remained for nearly twenty years. On the retirement of Mr. Gibbs, Mr. Allan started business as a builder and contractor. In that capacity he did much towards the erection of modern Cardiff. He carried out important contracts, including the head offices of the Barry Railway Company at Barry; extensions to the Mount Stuart Dry Dock, Cardiff; the Western Mail Buildings; extensions of the Royal Hotel and the Queen's Hotel; the Central Market, St. Mary Street; and Roath Park Presbyterian Church. He was a Justice of the Peace for the city and an old member and ex-president of the Cardiff Master Builders' Association. His only surviving son is Lieutenant Illtyd Allan, of the Welsh Regiment, who, in civil life, is a barrister-at-law.

Mr. H. Chatfeild Clarke, F.S.I., F.R.I.B.A.

Mr. Howard Chatfeild Clarke, F.R.I.B.A., died on July 12 from heart failure, following pneumonia, brought about by overwork. He had recently been actively engaged with surveys and valuations made all over the country at the request of the Ministry of Munitions, for which he acted as honorary adviser to the Ministry. He was the son of the late Mr. Thomas Chatfeild Clarke, also a distinguished architect, and was a Fellow of the Royal Institute of British Architects and past president of the Surveyors' Institution (1914-15). Many buildings in the City and West End were erected from his designs, among them the new hall for the Cordwainers' Company. He was surveyor to the Fishmongers' and Cordwainers' Companies, and to several of the leading insurance companies. Mr. Chatfeild Clarke was educated at Clifton College, and married a daughter of the late J. J. Galt, of Fernhill Park, Isle of Wight. He leaves three sons and three daughters. Two of his sons have commissions in the Army, and one of them has been reported missing and wounded.

[A paragraph in this week's editorial notes, on page 35, refers to the work of Mr. David Barclay and Mr. Howard Chatfeild Clarke, who were representative of two markedly different types of architect, and, between them, illustrate the versatility or diversity of gifts, comprehended by the profession which each in his own way had adorned.]

LEGAL.

Liability of Dissolved Partnership.

Richardson v. Chessum.

July 5. Official Referee's Court. Before Mr. Verey.

Mr. Verey, Official Referee, gave judgment on Thursday, July 5, in this consolidated action for the recovery of the balance of account for work done under a contract to supply corrugated iron and steel doors for the buildings which the defendants were carrying out at the Royal Albert Docks for the Port of London Authority.

The Official Referee, in delivering his reserved judgment, said that although there were two actions, one against Jesse Chessum and the other against Rowland Chessum, Jesse Chessum alone defended, and the issue in both actions was whether he was liable in either or in both of the actions. Jesse and Rowland Chessum were in partnership as contractors in a large way of business, and they had a contract with the Port of London Authority for buildings at the Royal Albert Docks. In June, 1914, the plaintiffs' tender for 146 doors was accepted. Correspondence passed between the parties, and that correspondence formed a complete contract to make the doors subject to engineers' alterations. Counsel for Jesse Chessum contended that it was a contract to deliver only so many doors as Chessum and Son should order, and the contention of the plaintiffs was that the contract bound them to deliver the number of doors which the contract showed would be required by the Port of London Authority. He was
opinion that the plaintiffs' contention w
right. The firm of Chessum and Son w
dissolved in 1914 and a limited liabili
company formed, to which all the busine
was transferred. Under the Partnersh
Act, the individual partners were liable f
carrying out the obligations of the fir
which existed at the time of the dissol
tion. He came to the conclusion that Jes
Chessum left it to Rowland Chessum
see that the goods were delivered by t
plaintiffs according to the contract, and
found that there had been delivery to t
partnership and that the defendants h
failed to accept the goods in accordan
with the contract. The goods sued f
were delivered under the contract. The
was a continuation of the obligation of t
partnership to carry out the contract a
pay for the goods. He gave judgment
the plaintiffs for £197 0s. 8d. in the o
action and for £227 6s. in the other.

Counsel for plaintiff asked for judgme
against both the defendants, as judgme
against one only would release the oth
Mr. Rowland Chessum, he said, was p
sent in Court during the hearing, althou
he did not defend.

The Referee entered judgment agai
both defendants, with costs.

Architect's Claim for Fees.

Aherne v. James Cycle Co.

July 16. Birmingham Assizes.

William de Lacy Aherne, archite
Waterloo Street, Birmingham, brought
action against the James Cycle Co., Spa
brook, to recover £140 fees alleged to
due.

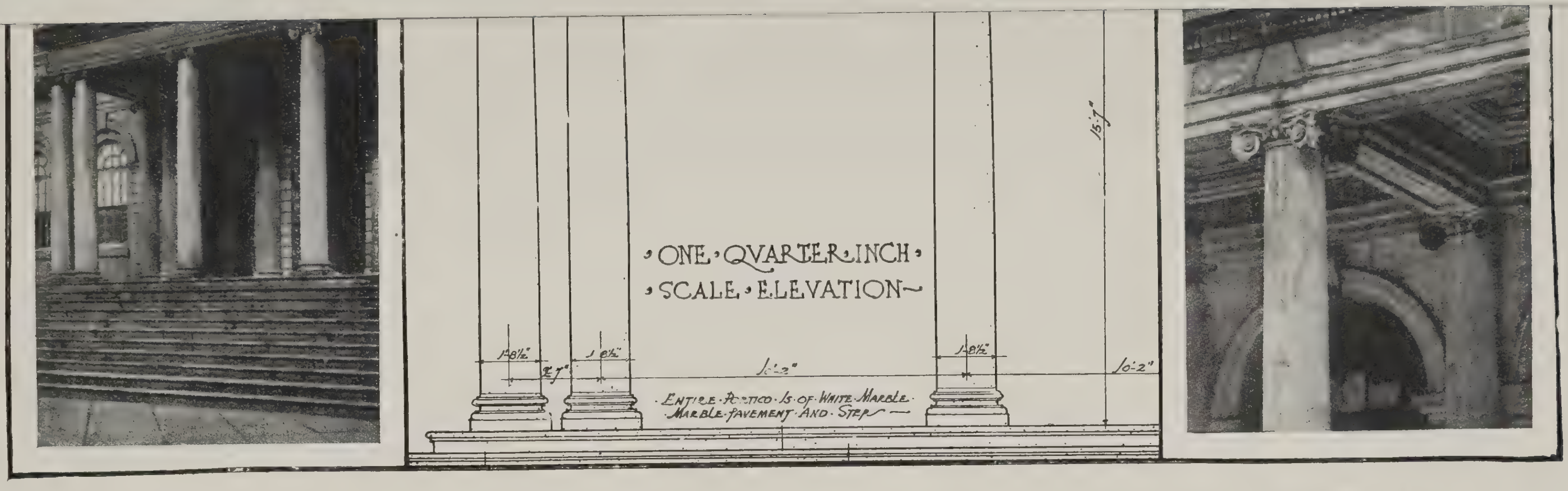
Mr. Ward (instructed by Mr. A. J. H
well) was for plaintiff, and Mr. Eales (
structed by Docker, Hosgood and Co.)
the defendant company.

It was stated on behalf of the plain
that in the autumn of last year he
instructed by the managing director of
company to prepare plans for a cante
and agreed to do the work for a fee
10 guineas and 2½ per cent. on the to
cost of the building put up, which was
pected to be £3,600. It was necessary
get the sanction of the Ministry of Mu
tions before anything could be done,
in all, acting on further instructio
plaintiff prepared five schemes, visit
several munition works and inspecting
canteens there. Eventually the work
given to another architect.

Mr. A. McEwan, A.R.I.B.A., vice-p
sident of the Birmingham Architectu
Association, gave evidence that
plaintiff's charges were quite reasonable

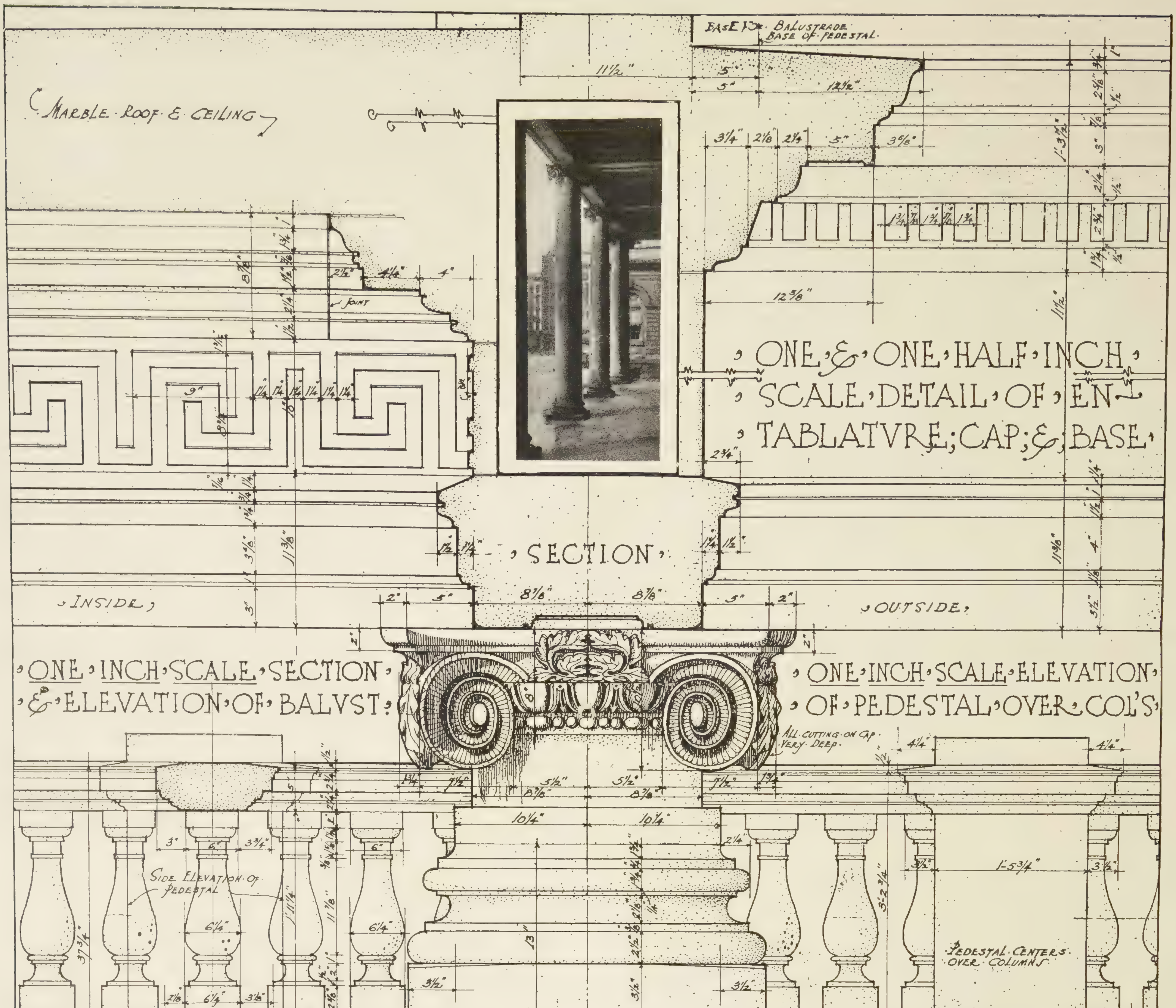
For the defence Mr. J. B. B. Ar
managing director of the company,
plaintiff's offer was to supply drawin
specifications, and quantities for
guineas and 2½ per cent. on the cost if
work was proceeded with. When th
terms were put to Mr. Aherne in the cou
of correspondence, he objected to the
clusion of the specifications and quantit
and as he did not reply accepting, witn
thinking there was an end of the matt
instructed another architect, who prepa
fresh plans.

His Lordship found that the contract
not include specifications and quantit
and that the plaintiff was prevented fr
going on with what he had undertaken
do. In addition to the ten guineas
which Mr. Aherne was obviously entitl
he awarded forty guineas damages
gave judgment for plaintiff for f
guineas. His Lordship added that it
a proper case to bring in the High Cou
and he certified for High Court costs.



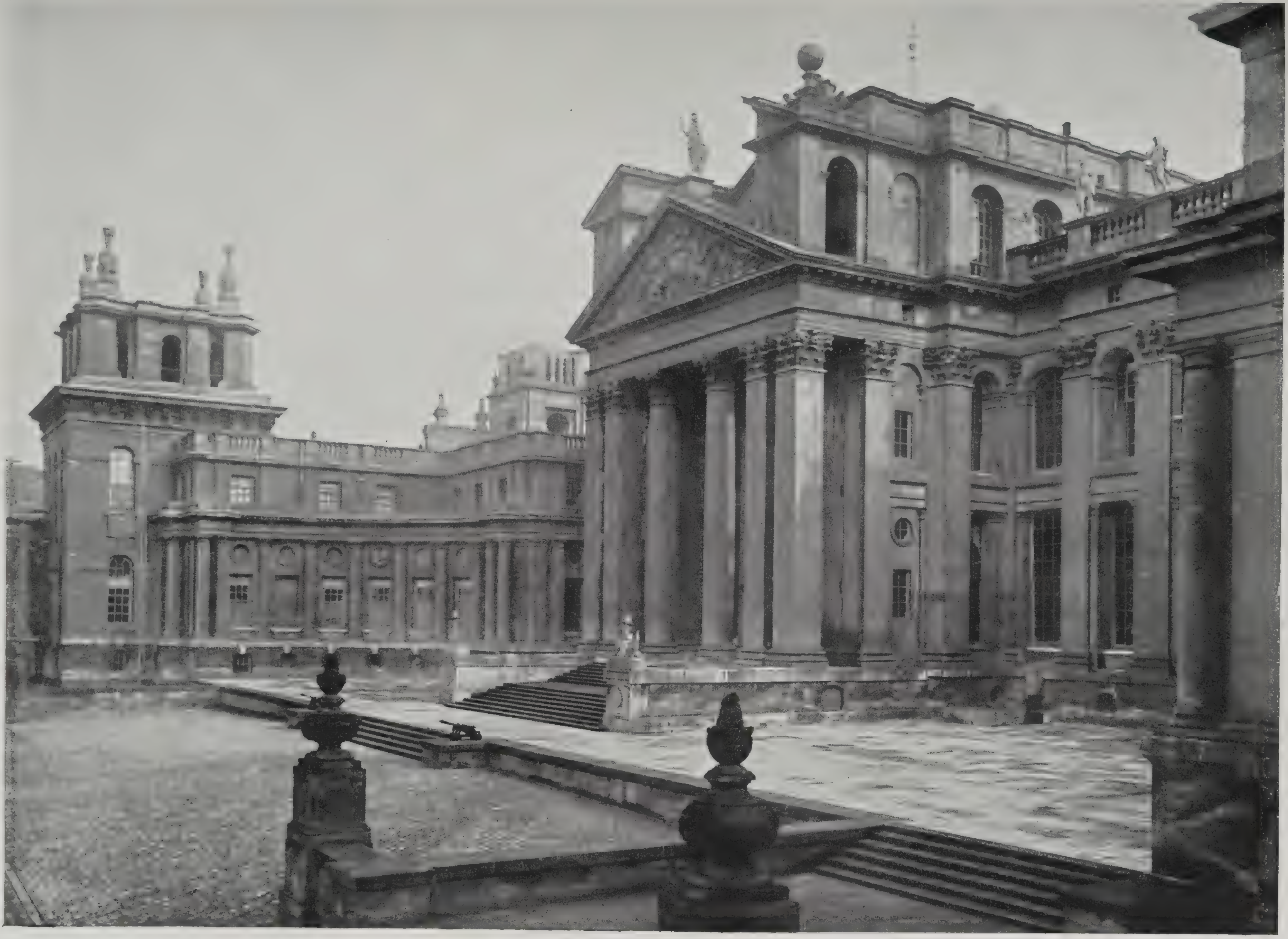
ARCHITECTS' WORKING DRAWINGS (SERIES II.). XLIII.—COLUMNS AND ENTABLATURE OF PORTICO TO NEW YORK CITY HALL.

JOHN McCOMB, ARCHITECT.


MARBLE ROOF & CEILING
BASE TO BALUSTRADE BASE OF PEDESTAL
ONE & ONE HALF INCH SCALE DETAIL OF ENTABLATURE; CAP; & BASE
SECTION
INSIDE
OUTSIDE
ONE INCH SCALE SECTION & ELEVATION OF BALUST
ONE INCH SCALE ELEVATION OF PEDESTAL OVER COL'S
ALL CUTTING ON CAP VERY DEEP
SIDE ELEVATION OF PEDESTAL
PEDESTAL CENTERS OVER COLUMNS
JOINT
ONE QUARTER INCH SCALE ELEVATION
ENTIRE PORTICO IS OF WHITE MARBLE MARBLE PAVEMENT AND STEP

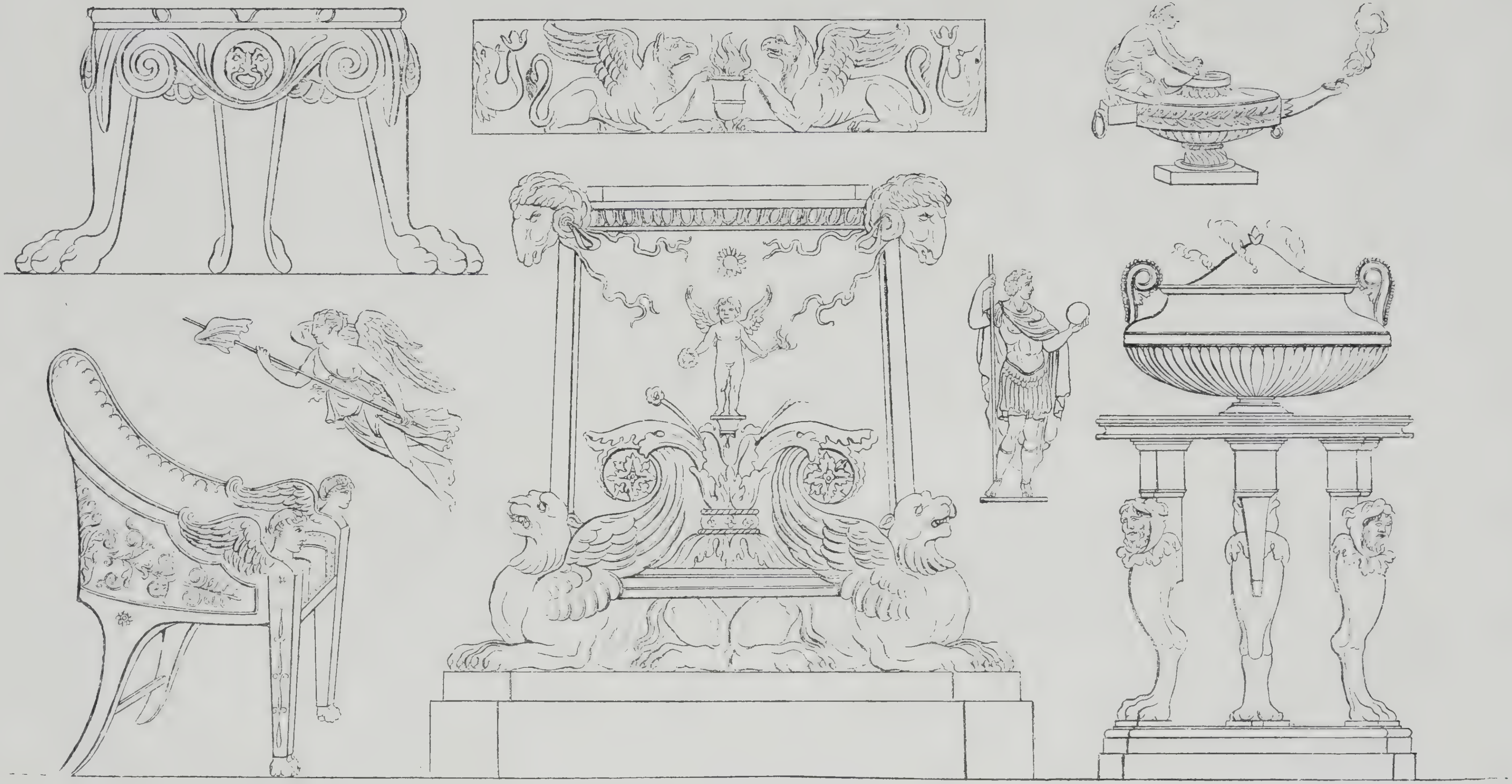
ARCHITECTS' WORKING DRAWINGS (SERIES II.). XLIII.—COLUMNS AND ENTABLATURE OF PORTICO TO NEW YORK CITY HALL.

JOHN McCOMB, ARCHITECT.



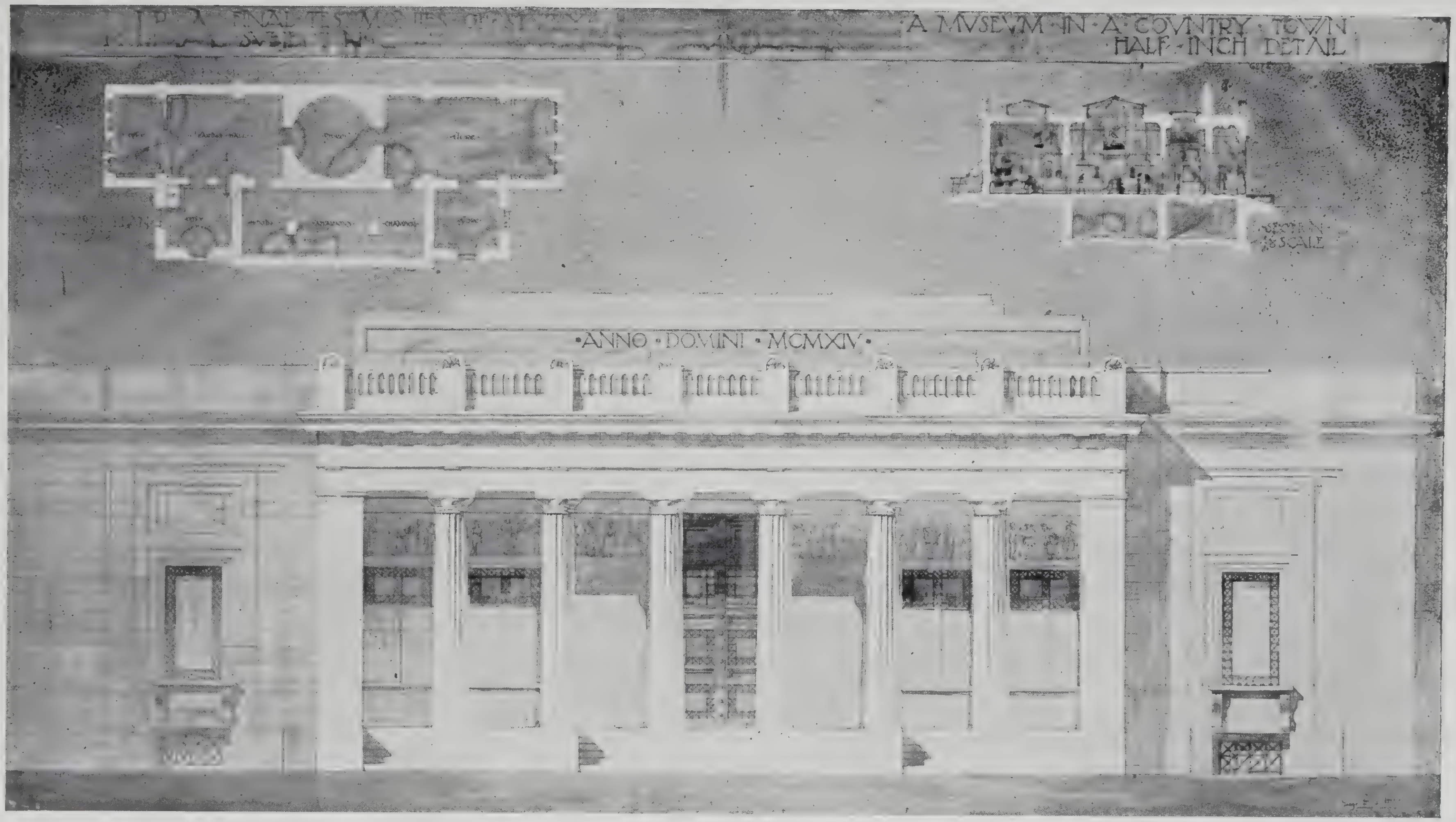
MONUMENTAL ARCHITECTURE (SERIES II.). XVI.—BLENHEIM PALACE, WOODSTOCK, OXFORDSHIRE: DETAIL OF SOUTH-EAST FRONT.

SIR JOHN VANBRUGH, ARCHITECT.



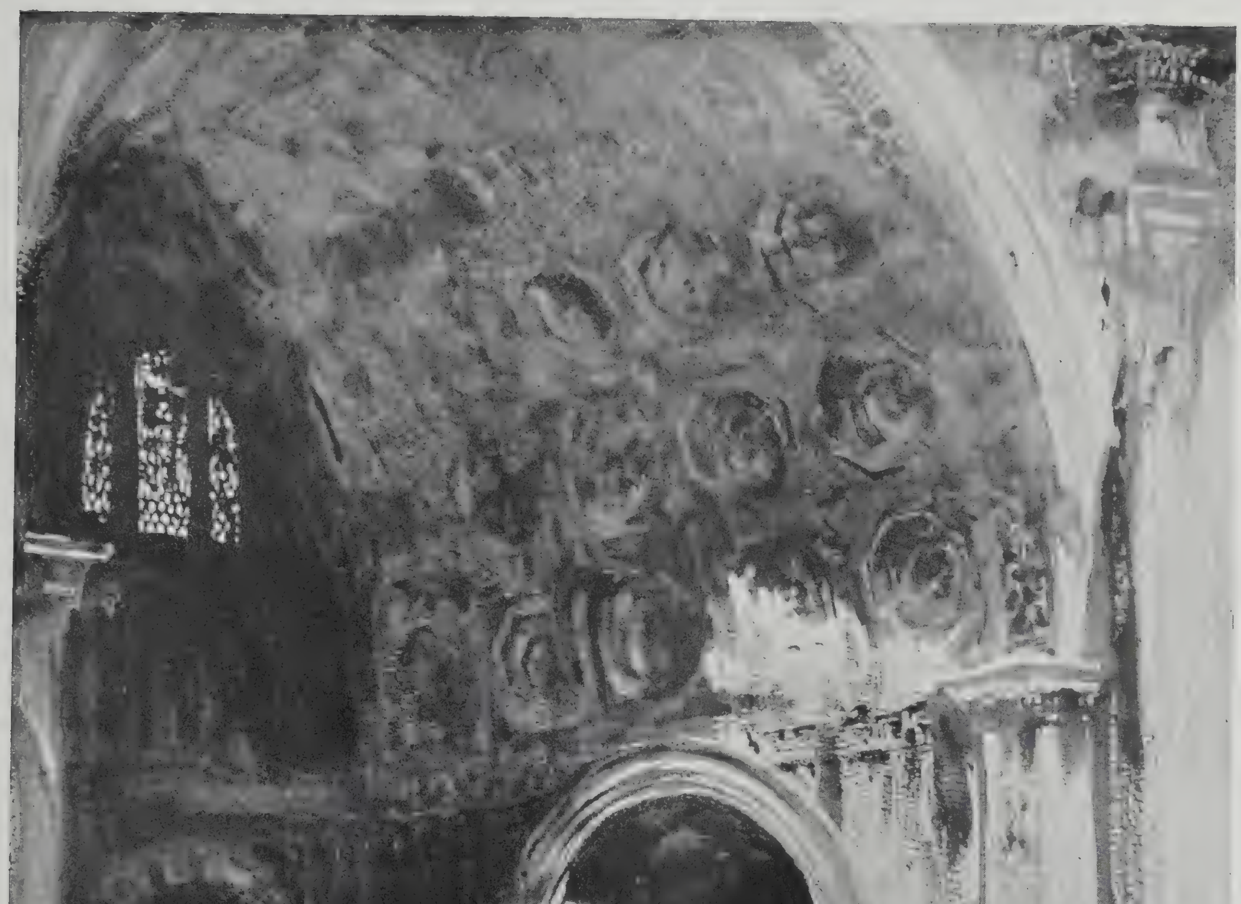
DETAILS OF CRAFTSMANSHIP (SERIES II.). XXXIII.—EMPIRE STYLE DESIGNS.

BY THOMAS HOPE.



STUDENTS' DRAWINGS (SERIES III.). II.—A MUSEUM IN A COUNTRY TOWN.

BY GEORGE H. G. HOLT.



ARCHITECTURAL DRAWINGS AND SKETCHES. VIII.—THE BASILICA OF CONSTANTINE.

BY W. WALCOT.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

AUGUST 1, 1917. *TOTHILL STREET, WESTMINSTER.* VOLUME 46. No. 1178.

HAT the proposals for a Builders' Parliament
would receive assent at the half-yearly meeting
(held at Liverpool last week) of the National
leration of Building Trades Employers was never
loubt. That they should have been passed unani-
ısly is rather strange, considering the diversity of
ı's minds and the inextinguishable love of conflict,
so it was, and so the concert of industry was begun.
ıay therefore very well be that July 25, 1917, will
eafter rank as a memorable date in the annals of
ıstry, because it was then that the National Federa-
ı set their seal, so to speak, to the proclamation in
ch employers express their determination to seek
ıstrial peace and ensue it. Probably the unanimity
be taken as a hopeful sign that the employers
convinced of the folly of strife, and are very
ing to discuss labour problems in a milder spirit.
apparent, also—or the movement would not have
ched its present stage—that the wiser heads among
workers are willing to put an end to mere disputa-
ısness; but the operatives being so much more
ıerous than the employers, it will be so much the
re difficult to bring them into line. To expect
lesale and instant conversion would be too
guine. So far, everything seems to have gone
ward with most extraordinary smoothness, but it is
e prudence to assume that there are rocks ahead
his imperfectly charted sea. Difficulties with the
kers are sure to arise, because it is impossible that
new spirit can permeate the mass otherwise than
vly. This is said, not in discouragement of the
vement, but to prevent disappointment and to
nsel patience under vexatious conditions that are
ain to arise, and that will make large draughts on
magnanimity with which the scheme has been so
cessfully launched; on which auspicious start we
rtily congratulate all concerned in it.

* * * *

Rather superfluously, M. Emile Mâle has written a
k to prove that the Germans have no art in them;
le Dr. G. Papillault might have spared himself the
ns of showing that the high claims of the Hun to be
finest flower of intellect are equally unfounded.
ese three years past we have learnt enough about
rr Professor Boche to have become thoroughly well
ıre that the only arts in which he excels are ignoble
despicable in the extreme. What gulls we all were
take these pretenders at their own preposterous
uation! It is some consolation to find that the
nch showed the same generous-minded credulity;
says M. Mâle, France had come to regard Germany
the chosen home of Romanesque and Gothic art;
ereas, as he proceeds to show, "Germany has no
m to figure among the great artistic nations. It is
she, but France, that has the right proudly to bear
cathedral," referring to the mosaic in the Louvre,
which, amidst a group of figures of the leaders of
among the nations, France bears the plaque of
noges enamels, while Germany carries a mediæval
rch). This particular misconception was perhaps
quite so prevalent in England as M. Mâle thinks it
ıave been in France; but France was ever too
valrous to assert its own just claims in the domain
art; whereas the Boche was ever wont to trumpet
st loudly the virtues that he most lacked.

* * * *

ermany claimed to be "an originating and creative
ce" not only in Romanesque and Gothic architecture, but also in all the arts, especially in sculpture and in wood engraving. M. Mâle demonstrates that she was nothing of the kind. She borrowed her Romanesque from Lombardy, her Bamberg sculpture from Reims. "As soon as the Germans appear in the history of art, they are seen as imitators, and throughout the centuries this will remain their indelible character. . . . Far from their art being young, free, spontaneous, it is, on the contrary, servile, mechanical, an art of routine. . . . The noble and classical figure of Our Lady of the Visitation at Reims becomes at Bamberg "an herculean matron with the smile of a negress"—very German indeed in the translation. Very German also is the accentuation of the curves and consequent destruction of the harmony of line of an armchair of Louis XV. style, as M. Mâle relates, the egregious Boche either supposing he could improve what was perfect, or that he could disguise his theft. The reviewer of M. Mâle's book ("L'Art Allemand et l'Art Français du Moyen Age"; Armand Colin) reminds us, too, in the "Times Literary Supplement" of July 26, of "the spectacular display of most unscholarly though most Prussian temper, vanity, and arrogance, which was made over the pseudo-Leonardo bust, when the *ipse dixit* of an almost-highest connoisseur sought to reinforce itself with that of an all-highest master, and both were dissolved in the laughter of two continents." At the pigheaded obstinacy of Professor Bode in persisting that the bust was a Leonardo after Lewis's very modern waistcoat had been found inside it we marvelled at the time. To this farcical situation we had not then the key, which is, that whatsoever a German says to be true must be true—as an American would say, somewhat ambiguously, "it has got to be true."

* * * *

Germany seems to be as nearly destitute of all power of invention as a nation well can be. Even its lies about the war are not so much inventions as distortions of the truth, and miraculously clumsy at that. Its claim to the invention of the art of printing from movable types, one remembers, is of the customary colossal impudence. Unless impartial and patient investigators like the late William Blades have erred, the statue to Gutenberg or Geinsfleisch glorifies an impostor and a thief, who stole the art from his employer, the Dutchman Coster, and absconded with it to Mainz. When, in the course of one of the periodical controversies on this subject, it was declared that the supporters of the German claim had resorted to barefaced forgery of documents, the accusation seemed incredible, and a reflection on those who made it. We now know the Boche much better than to credit him, as we did formerly, and somewhat fatuously, with a sense of honour. When Nietzsche proclaimed, in effect, that truth was anything that a German cared to make it, we all thought that this "Thus spake Zarathustra" business was but the mopping and mowing and maundering of a madman; but, behold, the Boche has adopted with alacrity and without reserve this brainsick gospel, and, in putting it in practice, has gone beyond his mystical master with all the ardour of a literal-minded disciple.

* * * *

German unscrupulousness is inveterate. British manufacturers have long known that their goods have been systematically pirated in Germany, and that their businesses have been insidiously undermined by

German spies; but they could hardly have been aware, until the fact was revealed in these pages by two Belgian contributors, that these dishonest practices were deliberately pursued as part of the national policy of "peaceful penetration"—that, for example, our new inventions were dissected, reconstructed in inferior materials, were slightly modified in form, and were then brazenly patented as German inventions. Well may "The Times" reviewer remark that "For industrious and systematic exploitation of other peoples' ideas," whether in art or in industry, "no one can beat the Germans," and certainly no one aspires to such a victory. After the war they will be in this respect worse than ever, because they will be in desperate straits, and we would suggest that the fullest possible evidence of their commercial and industrial depravity should be collected for production at the right psychological moment. Their depleted exchequer could not yield adequate compensation to the foreign manufacturers whom they have systematically robbed; but all possible means of circumventing the Boche's low cunning and of preventing further piracy should be rigorously enforced.

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That "most can raise the flower now, since all have got the seed," is one of the few truths that the Boche has not shunned. Stuart and Revett's "Antiquities of Athens" he promptly pirated in some of the most wretched-looking editions of that work that have seen the light, the pirated illustrations being incredibly bad specimens of draughtsmanship, and the typography at the lowest level of the printer's art, of which the Boche feigns to be the discoverer. At the annual Leipzig Fair, in the 'twenties, the "best seller" was always the latest "Waverley Novel," Scott's prolificacy being usually equal to the supply of a new one for each fair. These novels were immediately translated into German, and sold at the fair by several publishers. One year—apparently 1825, or 1826—Scott failed them. All but one of these enterprising pirates were that year left desolate. That one particular Boche, however, made a great "scoop." He commissioned some German hack to supply Scott's omission. A new "Waverley Novel" was written for the occasion, and palmed off as genuine, the fraudulent publisher, having of course the monopoly in the article, making huge profits out of it. That novel should take high rank among the curiosities of literature. It was called, if we remember rightly, by the odd title "Woddamoor," and is said to have been translated into English, probably at the instigation of the pirate, who would not lack the impudence to follow up thus his fraudulent advantage.

* * * *

Uppingham is now to be reckoned among the public schools that have decided to include building in their war-memorial schemes. A "great memorial quadrangle, of which the present schoolroom and chapel will form part," is to be completed by the erection of a hall and colonnade. That most of the great public schools seem bent on building is easily explicable. With civilised man building is a healthy and natural instinct, which is exercised whensoever and wheresoever a valid opportunity arises. Then, there is no more noble way of expressing veneration for the dead than by erecting a stately architectural monument. A minor consideration is that many of our public schools have been long in need of additional buildings, and it is with perfect legitimacy that this opportunity of getting them is seized—not, we are sure, with callous adroitness or indecent avidity, nor even consciously, for in every case the *primum mobile* is clearly a decorous and unsophisticated desire to commemorate the heroic dead. That the memorial should be not merely decorative, but should also serve a highly useful purpose, does not degrade it, but increases its dignity.
It is because architecture is the Mistress Art, and
next to poetry, the highest expression of the mind
man, and not for any more sordid consideration, t
we welcome this tendency to erect chapels, scho
libraries, and other dignified buildings, in memory
the fallen; for no more honourable form of monum
can be conceived. Moreover, so great an occas
should in every instance imbue the architect with
most reverential regard for an art that is chosen
fulfil the most sacred functions. This is one of
many ways in which war will leave an indelible m
on architecture.

THE PLATES.

The Lehigh Valley Terminus, Buffalo, N.Y.

THE Americans have long realised that the railw
terminus, being in a sense the gateway to a c
should be built in a manner befitting the impo
ance and dignity of its function, and they have p
duced many remarkably fine results in the design
this type of building. In this issue we illustrate a vi
of the exterior and a working drawing of the princi
elevation of the new terminus of the Lehigh Val
Railroad, which recently completed at Buffalo, N.
from the designs of Mr. Kenneth M. Murchison, i
building of high architectural merit. The station
in reality two buildings separated by Washingt
Street, communication between the terminal buildi
proper and the baggage building being by means o
tunnel under Washington Street. The exterior
the main building is of Indiana limestone. T
division offices are on the upper floors surrounding t
main waiting-room. Our reproductions are made
courtesy of the "American Architect."

Plasterwork in Ashburnham House.

Ashburnham House, which now forms part of We
minster School, is commonly attributed to Inigo Jon
but it is more than probable that the design was ma
by Webb, who is said to have carried it out somewhe
about 1640. Mr. Harry Sim, who has made
exhaustive study of the building, thinks it may ha
been built between 1633 and 1640, or between 16
and 1670. If the earlier date is correct, Inigo Jon
was the architect, but if the later is the true one We
must have been responsible for the design, Jon
having died in 1652 and Webb in 1672. The hou
contains some admirable plasterwork, two exampl
being illustrated on one of the plates in this issue. T
great drawing-room has a fine plaster ceiling. A lar
plain cove springs from the cornice out to a bea
running parallel to the sides of the room. In t
centre is a large oval, surrounded with rich modellin
which originally was raised to a small dome. T
plaster ceiling to Richard Busby's library is a mo
ornate piece of work, cherubs' heads being introduc
among the foliage.

The East Elevation of Blenheim Palace.

The east front of Blenheim Palace is much mo
satisfactory as an architectural composition than mo
of the other elevations to the building. It is restrain
and dignified in design, and lacks the theatric
mannerisms of the principal front, a view of whi
appeared in our last issue. A further illustration
this series will be given next week.

Obelisk in the Market Place, Ripon.

This obelisk, which was erected in 1701 by Mr. Jo
Aislabie, who was Mayor in the following year, co
£564 11s. 9d., and is reputedly the finest of its kind
England. It is called locally the "market cross," whi
may or not be an indication that it succeeded a re
market cross and inherits the designation. Ripo
indeed, would have been exceptional among ancie
towns if it had been without a market cross, of whi
this fine obelisk no doubt occupies the site.

HERE AND THERE.

OW gigantic a task it will be to repair the ravages of war! Over a series of years, millions of muscular men are withdrawn from productive vity—they do nothing but consume and destroy; le the energies of countless thousands of women absorbed in making the instruments of destruction. l it be possible to redeem this prodigious waste—to rtake the vast accumulation of arrears? It may be sible, but it will not be easy. It will be the less easy ause, alas, so many thousands of the men will return to work. We shall have to overtake the ears with far fewer workers than we had in the days peace and plenty. We shall have, then, to make most of our resources in men and machinery, aining from both the utmost service they can yield. men I mean directors as well as workers; by chinery I mean the machinery of management and anisation as well as the engines of production.

* * * *

re we, then, to sweat the workers, to impose upon m harder conditions than those against which they often rebelled before the war? By no means. Any h attempt would be a fatal mistake. But man and chine may be—must be—tuned up for the produc- of more and better work without hurting either—chance to the improvement of both. We had got ner slack in such matters. Neither man nor chine took kindly to the tuning-up process, the man enting it because he saw in it no advantage for self, while the machine was too old-fashioned to pond profitably. To the man some inducement st be offered; and unresponsive machinery must be apped. How to make the best of the machine, Lord verhulme suggested a week or two ago in an nirably practical review of the situation. We are keep the wheels revolving without cessation, day night. Does that imply that the man is to be rworked? Not at all. On the contrary, it may an that his working-time will be shortened without riment to his earnings. Even the great war cannot r the fact that there are only twenty-four hours in ay; and if the work is done in "continuous shifts" machinery need never be idle, and no "shift" need k more than six hours at a stretch. Overtime ld be abolished, as, before the war, it had been, instance, in printing offices where the night-shift tem had been adopted.

* * * *

here would result a great gain in the health, our, and freshness of the workers, whose physiology psychology the employers are beginning to study; maximum output would be got from the machinery; t, rates, and insurance would not be paid on pre-es that now for a considerable number of hours—l, by aggregation, days, weeks, years—yield no rn on these items. As a slight adverse set-off, re would be, of course, extra wear and tear on the chinery and on the building; which latter, to with-nd the continuous strain, must be no ramshackle d of early Victorian construction, but a solid and nd structure on the new model—a "daylight fac-," so arranged that all operations follow each other lirect sequence, and are performed with the utmost inable facility, without hindrance or obstruction—ctory into which its owners will not be ashamed to in the light of day, but in which the workers will be amed to be slovenly in person or in performance. everything will "go like clockwork," worry, which s energy, will be eliminated; and the cheerfulness t makes for alacrity will be in every way promoted. ide and out, the factory will be a pleasant place to k in. Light, ventilation, equable temperature, and the means of cleanliness (the enlightened owner supplies baths) will keep the workers healthy and fresh, comfortable and contented. They will receive a higher wage, because in these conditions, in this favourable environment, they will earn it. On these lines of sweet reasonableness the architect is now advising his factory-building client. This may be Owenism, or Ruskinism, or Morrisism; some belated pessimist may even denounce it as Utopian, Arcadian, New Lanarkian. It may be all these things; but it is also concrete fact—reinforced-concrete hard material fact. In America no other policy of industrial building is tolerated; and, in Britain, Bournville and Port Sunlight are not the only examples of the commercial success of broad-minded and enlightened views on industrial economy.

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In the last resort, does not everything depend on motion—on "getting there" by the "quickest route, cheapest fare"? Motion, therefore, is an expensive thing to waste, and must be economised to the utmost extent and in every direction. This economy has been well-nigh perfected with respect to machinery and transit, and thoughtful planning has given it its gangways and fairways and orbits. At present, the orbits are apt to be very eccentric. In France, the scarcity of industrial man-power has caused employers to take up rather seriously, during the past few months, the "motion study" notions which have been for some years past in course of elaboration in America. Messrs. Taylor and Thompson, and Mr. Frank B. Gilbreth, having devoted many years to the studious observation of the movements of men at work, have found that much motion is wasted, and that this wastage can be prevented by systematically performing every operation in the quickest and best way. In his book on "Motion Study," Mr. Gilbreth relates some most astonishing results of doing work in the right way—for that is what it comes to. By economising on motion, a worker may produce twice or thrice as much work, with less fatigue.

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Mr. Gilbreth has applied his system more particularly to brickwork. It is beyond dispute, he says, that the fastest bricklayers, and generally the best bricklayers, are those who use the fewest motions, and not those who are naturally the quickest-motioned, and he states that they instinctively use one set of motions when they are trying for speed, and another when they are not rushed. He shows how economy may be attained in every detail—with the right tools rightly handled, and the materials and appliances so disposed as to save effort and ensure the best results in the quickest time. Thus, "an apprentice should be taught to hold his trowel like a razor, with two fingers only, and with the thumb on the top of the handle: the thumb should never be put round the handle of the trowel." How many of our young bricklayers have been taught how to hold a trowel? And still fewer have been persuaded to suppress their idiosyncrasies in the use of it. There are, unless I misunderstand Mr. Gilbreth, commonly in use about eighteen (there are no doubt many more) wrong ways of laying a brick, and there is only one right way, which most bricklayers have failed to discover. There are also several wrong ways of loading bricks into a barrow, all which are religiously and devoutly followed. In fact, it would seem that the working builder loses no opportunity of wasting time and strength. But it is very obvious that it is only the "young shaver" who will be easily persuaded to hold his trowel "like a razor."

DIOGENES.

FROM CANNON STREET TO CHARING CROSS.*

BY W. D. CARÖE, M.A., F.S.A., F.R.I.B.A.

Cannon Street Railway Bridge (Sir T. Hawkshaw, 1863-66).

UNTIL we come to Chelsea the South-Eastern and Chatham Railway Company absorbs all the railway bridges spanning the river, and even half of the Grosvenor Bridge. It cannot be said that the railways have been kind to London or worthy of their great importance in modern life. Nevertheless, Cannon Street Railway Bridge holds first place, and in certain aspects approaches that phase of the majestic we are apt to associate with the ungainliness of the mastodon. So far as architectural forms are applicable at all to cast iron, we must accord its designer some measure of success. We don't want it, but we might have much worse. We feel how gladly we would follow the guidance of the Pennsylvania Railroad in New York and put the railway underground, and bury Cannon Street Station with it. This is a quite serious suggestion. What New York has done on a mighty scale in rock, London can do on a comparatively small one in clay.

Southwark Bridge (John Rennie, 1814-19).

Southwark Bridge was the second to which cast-iron was applied in London. Its utility was never fully developed, and as its life was comparatively short, let us say of it that, though its merit was perhaps mediocrity, its lines were generally pleasing. This was a true arcuated construction, iron voussoirs, set together by bolts in place of mortar, being employed. Its distinction lay in the bold sweep of its three great arches. Its continuance seems to have been in jeopardy and its gradient was against it. So much was this the case that it was deemed fitting to re-erect it, even without the widening of its approaches. Sir Ernest George, R.A., has been wisely called in to ensure our having something better, and we can but regret that he was not given an opportunity of showing us by a complete stone construction the outcome of that delightful series of studies expressed in water-colour which he has made of most of the best bridges of Europe. Sir Ernest's design, through no fault of his, to my mind suffers somewhat by the lack of shore abutments projecting from the quayside—almost an essential for monumental bridge construction. It may be useful here to make an interpolation. The bridges erected before old London Bridge was finally demolished were, in order of date: Westminster, Blackfriars, Vauxhall, Waterloo, Southwark. The foundations of all more or less gave way, but do not let us thereby blame their designers. The starlings of London Bridge occupied so much of the waterway that their removal altered the Thames between London Bridge and Teddington from being almost an inland lake to the stream as we know it. The designers of these bridges arranged for the former condition and not the latter, and the failure of their work was no fault of theirs.

St. Paul's Bridge.

Of St. Paul's Bridge I shall not say much. I have never been seriously convinced of the need for it. If it is needed, I think St. Paul's Cathedral should have formed the focus of the scheme rather than the catspaw of its opponents. There are those who assert that a lack of architectural grasp on a large scale is inherent in the race. Is it possible that the development of this great scheme on its determined lines gives substance to the contention? I feel convinced of this, that the practical needs of the traffic by way of averting congestion, and the architectural needs of
Paul's and the occasion, do really happen to coincide
this case. I am equally convinced that this happy f
has not been fully grasped by those in charge of t
scheme.

St. Paul's Railway Bridge (Messrs. Mills, Wol Barry, and Burnet, 1883-6).

Blackfriars Railway Bridge (Joseph Cubitt 1863-4).

Two railway bridges nestling like love birds,
perhaps shirking criticism, come next—St. Pa
Bridge, an iron arched construction on stone piers,
so blanketed by its neighbour that its existence
hardly realised by many. That neighbour, Bla
friars Railway Bridge, erected, as well as designed,
Joseph Cubitt, tries to be architectural, with
clustered columns and scrolled shieldpieces.
condemn it root and branch, by the very fact of
inherent selfish blanketing. It possesses an alm
calculated intrusiveness, denying the enjoyment
ought to be allowed of other structures and prospe
on and off the river.

Blackfriars Road Bridge (Old) (Robert Myl 1760-69).

The first bridge of Blackfriars was projected in 1
(by Act of Parliament), and was the first work of
Bridge House Estates outside London Bridge.
competition was instituted, and out of twenty desi
sent in that of a young Scot, Robert Mylne, fresh fr
study in Rome and on the Grand Tour, was select
Despite all that the great Dr. Johnson could do
burke it by way of favouring his friend and *prot*
Gwynne, it was erected and opened in 1769.

The elliptical arch was declared by Johnson and
critics to be as unsightly as it was inherently we
collapse sooner rather than later was prophesied, al
no purpose.

We can only regret that when under-tra
demanded more waterway and over-traffic an eas
gradient, the monumental instinct which Mylne
fed, fostered, and expressed had expired. The Bri
had cost £153,000 in 1760-69. In 1833, a signific
date in relation to the removal of Old London Brid
owing to the ravages of the water upon the Portla
stone employed, £103,000 had to be expended.
the same time, the crown of the road was lowered
the approaches were raised, the gradient being redu
from 1 in 6 to 1 in 24. Mylne became Surveyor of
Paul's, and his work there commands our resp
We may recall that he built for himself an interest
mansion just between his bridge and the gr
cathedral, on a spot where now stands St. Paul's R
way Station.

Blackfriars New Bridge (Joseph Cubitt, 1864-

What wayfarer across our present Blackfri
Bridge, who has any pride in his environment, is
depressed by the circumscription of his view seawar
It is one of the peculiarities of bridge construction t
in few instances does the structure make any appea
those who pass over it, unless a flanking view has b
first obtained. As regards Blackfriars, the flank
view is possible only to those who approach it from
west on the Middlesex shore. The appeal in this c
from whatever aspect made, is not a strong o
although strongly made by an excess of applied ar
tecture and meaningless ornament. This is insid
work. We have four granite shafted "Gothic" fo
to serve for piers. They are hopelessly without sc
carry nothing but a loiterer or two, and are joined
by some iron segmental arches, said to be excelle

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* Further extracts from a paper on "London Bridges," read before the London Society.

onstructed. I am glad to accord them such merit as ıey possess. The designer seems to have been shamed of his good construction, for he masks it with cast-iron petticoat, ornamented and balustraded after ıe manner of the manufacturer's catalogue. This ıaracteristic Victorian effort at monumental prettiess cost £475,000. We must console ourselves by ontemplating the work of an age surer in its concepon of monumental fitness.

WATERLOO BRIDGE (John Rennie, 1811-1817).

In Mylne's day the orders held sway. His Ionic rder at Blackfriars no doubt led to the Doric at Vaterloo, the masterpiece of our bridges, opened in 817, and fitly called after the great battle. "Good ine needs no bush," and I refuse to admit the riticism that its "order" is an extraneous addendum. : just adds the monumental note, and brings all the arts into harmonious scale.

The bridge had suffered at one time from the attenons of the gas engineer. Some nondescript "reachıe-down" lamps and lamp-posts had supplanted the dmirable originals. The R.I.B.A., aided by Sir eorge Frampton, succeeded in setting right that lapse f taste. I well remember how, many years ago, I was ebuked by one of the protagonist pundits of the .C.C. for "exaggerating the importance of such a etail."

It is said that the scour of Thames unbridled is ndermining the security of this admirable structure, nd that its condition is such that it cannot be idened. I could wish it may never require widening, ith a new Charing Cross Road Bridge to relieve it. ut whether or no, I have faith in the skill of our ıgineers that they will see to it that so fine a monuıent is never in jeopardy.

HARING CROSS RAILWAY BRIDGE (Sir J. Hawkshaw, 1860).

And now we come to Behemoth itself. Of Brunel's Iungerford Bridge, its predecessor, the brick piers up the railway platform are still doing service in the hames, while the chains are spanning the Avon at ristol, where Brunel had won a competition in 1829 r a chain bridge he was never to see erected. Those ho want to know anything about Behemoth will find ll details set down in a reprint from the proceedings f the Royal Institute of Civil Engineers by Harrison Iayter, to which I must refer you. But remember that ehemoth single was bad enough, but Behemoth oubled is almost doubly disfiguring. Apart from the ıtrinsic ungainliness of the erection, I quarrel with it ecause, owing to its so prominent position at the river end, it obtrudes on all sides. It exasperates by its ffective obstruction. It obstructs the prospect of Vaterloo Bridge and Somerset House from Westıinster, and the prospect of Westminster from Vaterloo Bridge. Whichever way of approach, ocussing that best of all our river sweeps, far-famed y Wordsworth, there it blocks the outlook. Into the ecent controversy there is no need for me to enter. It fresh on your minds.

I am optimist enough still to trust sufficiently to the ood sense of our people to believe that in five or six ears' time the knell of the Monster will be sounded, nd a great road bridge projected to take its place. It eems perhaps strange that Kent should claim what urrey has never asked for. Indeed, the quite econdary position taken by the L. and S.W. in this ıatter has always been to me inexplicable. But I m conscious that use and custom are such that it is ıuch easier to withhold than to withdraw. If ıburban Kent had never had the facilities of Charing ross, suburban Kent would never have missed them, ut, having tasted of the apple, the knowledge is there: nd the greatest opposition must be expected from ıen of Kent and Kentish men, who had better be ppeased, and can be by even greater facilities than they already have. They have a name for obstinacy and pertinacity. Why not, then, seize the chance for through railway connection, from South Western as well as South Eastern to all the northern stations from Paddington to King's Cross? I am thus the strongest advocate of an underground station at Charing Cross, which will deal with South Western as well as South Eastern through suburban traffic, without passengers changing. It is the Pennsylvania of New York once more. What New York has done in much more difficult circumstances, we also can do.

Such a new Charing Cross Station would be much more satisfactory than the present, for it would be in immediate contact with the Metropolitan, the District, Bakerloo, Hampstead, and Highgate Railways, as well as with the Embankment trams and the Strand omnibuses, and it would form no block to the traffic.

We must not forget that the present railway systems of London were laid out for the most part when railway science was comparatively in its infancy, and when the power of driving tubes through the clay was unknown. We have to bring a very imperfect and confused system up to date in the light of our riper knowledge. The intercommunication railway problem of London is thus ripe for solution, and until that solution is determined and agreed upon paper—not necessarily the railways constructed—our much-desired Charing Cross improvement may have to wait.

I want to see a strong Railway Committee appointed at once *ad hoc*, to deal with this pressing railway problem, on which committee this society ought to be represented, because the amenities of London are so intimately concerned.

Taking, then, a new road bridge as a necessity of the future, which no Londoner worthy the name will be content to do without, here is my scheme for it. I am a low-leveller of firmest conviction, always with the proviso that the low level permits a stone bridge to be erected. Only if it be proved that that cannot be done will my prejudice be allayed. But I know it can be done. The levels are difficult—admittedly. But I have worked them out carefully, and I know that the difficulties can be surmounted. They are awkward chiefly, but far from insurmountable, in connection with the eastern entrance of the National Liberal Club and some of the shops and entrances in the block of buildings opposite, containing the Royal Colonial Institute. The general treatment of the Charing Cross approaches does not admit of great variety, and I find myself in pretty close agreement with the able and stately plan by Messrs. Niven and Davison, to whom I will only say that I had made my plan before I saw theirs.

My bridge, like theirs, is on the true axis of Northumberland Avenue. I demur altogether to the criticism that the Embankment would look "humped" by a rise and fall of the river wall at this point. The long level line, which is extremely valuable, can quite well be maintained as an outer walk, with an inner wall stepped up behind it. Such stepping is perfectly satisfactory and harmonious, and would in this situation be aided by the curve of the river sweep.

A feature of my plan is to send the trams under the bridge, which is easy enough. A tram station in connection with the Undergrounds at this point would be a great boon, and the cross tram traffic difficulty would be defeated. I do not want to see trams defiling the new bridge. On the Surrey side I place the two stations symmetrically on Waterloo Road as an axis running between them under a high level glazed station approach. One station is called "Waterloo." Let us call the other "Ypres," or *anglicé* "Wipers." The practical advantage of symmetrical stations is obvious; people who know their way about one will not be at sea at the other.

(*To be continued.*)

NEWS ITEMS.

Builder Awarded Military Medal.

Sergeant W. Helm, L.N.L. Regiment, who has been awarded the Military Medal for gallantry at the battle of Messines by leading the attack after his platoon officer had been killed, was formerly employed by Mr. Ray, builder, Cottam, Lancs.

A Perspective of Manchester Old Town Hall.

We have received from Mr. Gordon Hemm a reproduction in collotype of a perspective drawing which, at the request of the Manchester Corporation, he has recently prepared of the Manchester Old Town Hall, of which building, it will be remembered, we published about the middle of 1915 Mr. Hemm's complete series of measured drawings. The perspective is an excellent piece of draughtsmanship in Mr. Hemm's characteristic style, and it will be valued as a faithful record of a building that took high rank among the achievements of the Classic Revival.

Old Shoreham Church.

The Congress of the British Archæological Association at Brighton concluded with visits to the Norman churches of Old and New Shoreham and to Chichester, where the cathedral, the quaint St. Mary's Hospital, and the tiny church of St. Olave, dating back to Roman times, were inspected. In conducting the members over the Norman church of Old Shoreham, Mr. Mainwaring Johnston took occasion to point out that the famous zig-zag window in the flat Norman buttress of the south transept is misdescribed as a feature of the original structure. It is, he said, a later embellishment, copied from one of the similar windows in the tower buttresses of Clymping Church.

Uppingham War Memorial.

A general committee, composed of representative old boys, has now adopted the following scheme for the war memorial at Uppingham School: (1) To erect a memorial in the chapel; (2) to complete a great memorial quadrangle, of which the present school room and chapel will form part, by the erection of a hall and colonnade; (3) to raise a fund for helping in the education at Uppingham of the sons of parents who either have fallen in the war, or who, owing to the war, would be unable, without assistance, to provide for their sons the education which they had hoped to give them. Preference will be given to the sons of Old Uppinghamians. It is hoped to raise a sum of £50,000. An appeal for money will not be made until after the war, but the committee will be glad to receive promises of support.

"A Thousand and One Uses for Gas."

An ample supply of ever-ready hot water is among the prime needs of any type of institution engaged on "war work," whether it be a hospital, munitions factory, or a communal kitchen; and the British Commercial Gas Association, of 47, Victoria Street, Westminster, S.W.1, have done well to make the July number of their illustrated monthly, "A Thousand and One Uses for Gas," substantially a reprint of an earlier issue which dealt with the provision of hot water for institution requirements. Ample evidence is brought forward to show that gas and gas-coke as boiler-fuel secure not only the necessary reliability and efficiency in the working of the water-heating system but also the economy in fuel consumption which is more than ever desirable to-day. So practical are the advice and information given that we do not wonder that the earlier edition was quickly exhausted; for it is obvious that the reprint meets a wide and positive demand.

Six Hundred New Houses for Burryport.

A special meeting of the Burryport Urban Council has been held to consider what steps the Council should take in connection with the drainage scheme seeing that the Treasury had promised a grant of £30,000 towards the erection of six hundred houses at Burryport, three hundred houses to be proceeded with immediately. It was mentioned that a sub-committee of the Council had been appointed to visit the Local Government Board, and, seeing that an appointment had been made, some of the members thought it would be desirable to bring the drainage scheme before the Local Government Board at the same time. After a discussion it was resolved to appoint a committee to ask the Local Government Board to sanction the drainage scheme.

Birmingham Wages Award.

It is stated that the operatives in the Birmingham building trade are dissatisfied with the recent award of 1d. per hour increase in wages rates, and, while it has been loyally accepted on the advice of the leaders, one section of the trade has passed a resolution asking that application should be made for an additional amount. The original application was for an advance of 3d. per hour. Councillor Saunders (Carpenters and Joiners), in an interview, is reported as saying that great dissatisfaction was felt at the recent decision, but as the arbitrator was appointed by the Industrial Commissioners, his award would be loyally accepted for the time being. The third paragraph in the award had given rise to some criticism in the district, exception being taken to the limiting of the award to those engaged upon munition works. A letter had, however, been received from the Birmingham building trades employers to the effect that they had agreed to pay the additional 1d. an hour irrespective of the work the men were employed upon.

David Garrick Relics at the Victoria and Albert Museum.

Last year the Victoria and Albert Museum obtained the painted bedstead, with its original Indian cotton hangings, which was made between 1770-1775 for David Garrick's villa at Hampton. The bedstead was presented by Mr. H. E. Trevor, a descendant of David Garrick's brother George, and now, through the generosity of this gentleman, with the co-operation of some admirers of David Garrick, the Museum has secured the rest of the contemporary furniture which was made for the Hampton bedroom. These consist of three wardrobes, a corner cupboard, a basin stand, a dressing-glass, and five chairs. With the exception of the dressing-glass, all the furniture is decorated in green and yellow, in the same manner as the bedstead, some pieces having designs of Chinese figures and landscapes. The dressing-glass is supported by snakes in carved and gilt wood, and is decorated in a style designed to suggest Dresden china. Apart from its historic interest, the furniture presents an attractive scheme of decoration which should be useful to modern artists and decorators. It is at present exhibited in Room 57 of the Woodwork Galleries of the Museum.

BRIGHTON'S INDIAN WAR MEMORIAL.

With reference to the memorial to b
erected on the Downs, near Brighton, o
the spot where the remains of the India
soldiers who died in the local military ho
pital were cremated, Sir John Otter, ex
mayor of the borough, has been in corre
spondence with Mr. J. Allen Howe
curator of the Geological Survey an
Museum, upon the relative suitability
granite or marble for the ch'hatri, and
the result it has been decided to constru
the building of Sicilian marble, which wi
it is estimated, increase the cost to abo
£3,000. The Brighton authorities unde
take to contribute £1,500 if the India
Council will pay a similar sum. In th
latest letter from the India Office the su
is limited to £1,300, but that was on th
basis of granite as the material used.
tender has been accepted for the buildin
work for £2,473, but there will be oth
expenses in the preparation of th
ground and approaches.

In recognition of the care and attentio
given to the wounded Indian soldiers wh
were brought to Brighton after serving
France, a pavilion is to be erected on th
seaside by their grateful fellow-countr
men. At the request of the committ
which has the scheme in hand, Mr. E.
Henriques, Government of India archite
tural student, has (says the "Pione
Mail" of Simla), under the direction
Colonel Sir Swinton Jacob, prepared
plan of an Oriental character. The pav
lion is to be 45 ft. by 45 ft., and will for
a shelter from the weather. Funds pe
mitting, the whole building will be fac
with marble, prepared preferably
Indian workmen in India. There will
four shelter rooms, each with a separa
entrance, of which that on the north w
be the principal one. Facing th
entrance it is proposed to erect in t
verandah a marble slab, 5 ft. by 2½ ft.,
which the history and object of the buil
ing will be recorded. The centre court w
be provided with a domed roof, having
outside diameter of 11 ft.

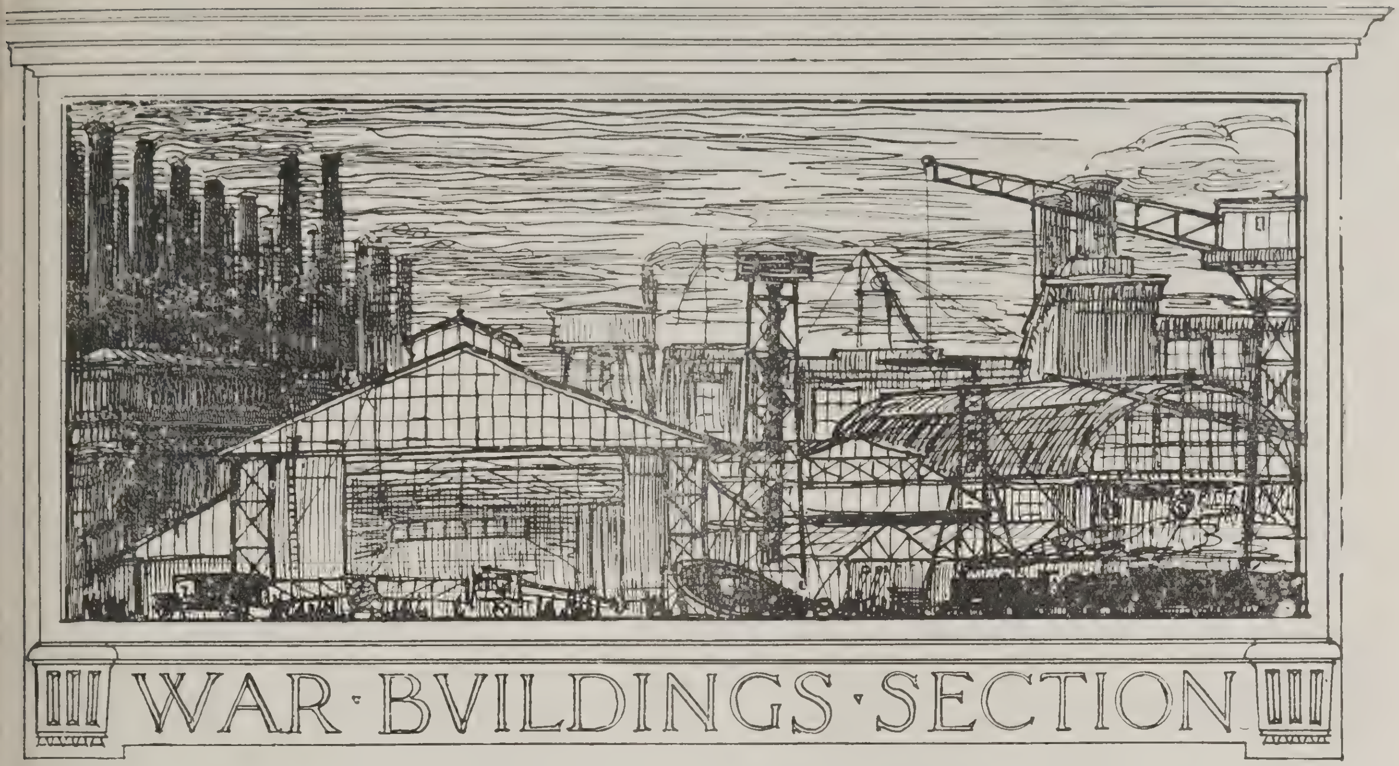
ROLL OF HONOUR.

Second-Lieutenant C. L. Wright.

Second-Lieutenant Cecil Lauren
Wright, Royal Garrison Artillery, who f
in action on July 7, aged thirty-thr
years, was the elder son of Mr. and Mr
Richard Wright, of The Lyntons, Ne
Malden, Surrey. He became a member
the Architectural Association in 1903, an
in 1910 was elected an Associate of t
Royal Institute of British Architects.

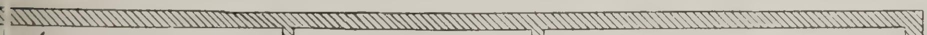
Second-Lieutenant L. Solomon, K.O.S..

Second-Lieutenant Leonard Solomo
who fell on April 23, aged thirty-two year
was a son of Mr. Lewis Solomo
F.R.I.B.A., of 21, Hamilton Terrac
N.W. He was educated at Universi
College School, London, Cheltenham Co
lege, and the City and Guilds Enginee
ing College, South Kensington. Short
before the war broke out he went
Canada, and on the day war was declar
joined the Dominion forces, but was pr
nounced to be "medically unfit." H
however, underwent an operation in ord
to qualify for active service, came to En
land, and, obtaining a commission, we
to the front line last December. He w
an Assoc.M.Inst. of Electrical Enginee
and bronze medallist Royal Drawi
Society.



ADAPTING BUILDINGS TO WAR-TIME NEEDS.

seems already a long retrospect to the early months of the war, but it is not long ago that one has forgotten the fusion and chaos occasioned by our t efforts to adapt ourselves to vastly nged circumstances. There were, for tance, soldiers to be housed and, all too n, wounded men to be sheltered; and accommodation available was both ited and, for the most part, unsatisfac- v. There was no time to waste, how- r, and having found the necessary ldings—having converted colleges and council schools into hospitals, skating rinks into cookhouses, and so on—the next thing the authorities had to do was to get them suitably equipped as soon as might be. A building without adequate heating, lighting, cooking, and water-heating arrangements was worse than useless; and it speaks volumes for the speed and patriotism with which the gas industry mobilised for active service that the requisite work was often carried out at an hour's notice and completed within a very few days.


Vegetable & Wash-up Sinks
SCULLERY
Vegetable Boiler
Vegetable & Wash-up Sinks
Hot water Installation for Sinks &c
SCULLERY
Hatch for dirty Crockery
Vegetable Steamers
Vegetable Steamers
Vegetable & Pudding Boilers
Griller on Stand
Pastry Oven
Griller on Stand
Whitehall Roaster
Whitehall Roaster
Gt Hotcloset & Carving Table
Treble Oven Range
Gt Hotcloset & Carving Table
Gt Warming Closets
Duplus Water Boiler for Teas &c
COUNTER
Duplus Water Boiler for Teas &c

PLAN OF A WORKS KITCHEN, SHOWING ARRANGEMENT OF GAS APPARATUS FOR PROVIDING APPROXIMATELY 850 MEALS.

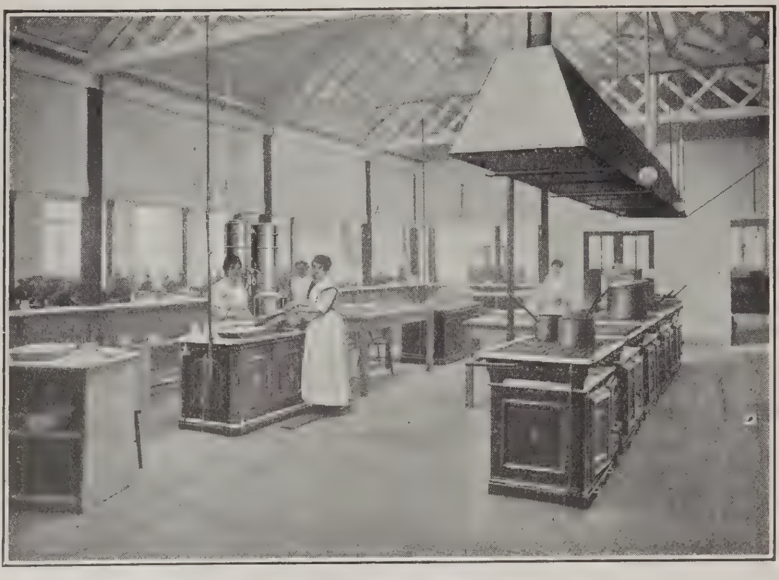
The Equipment of Hospitals and Temporary Buildings.

Take as a typical instance, St. Mark's College, Chelsea, which has been transformed into a military hospital. It possesses two kitchens, one each for the medical and the surgical section respectively. In the first of these, which is capable of cooking for 400 to 500 persons, the following apparatus was installed: A three-oven gas roaster, a 200-lb. capacity potato steamer, a double-oven gas range with hot plate, two hot plates for boiling and stewing, a gas-heated stock-pot stand, four gas boilers of capacities ranging from eight to forty gallons, and a combined carving table and hot closet.

The equipment of that kitchen was completed within thirty-six hours after first notice had been received by the gas undertaking responsible for the work—a record paralleled not once but many times all over the country, though even then the industry was hampered by lack of men owing to the immediate and enthusiastic response given by its employees to recruiting appeals. Nor was it only the hospitals which claimed its aid; there were camps to be fitted up for our own men and their prisoners, Y.M.C.A. huts to be provided with cooking and heating facilities, and, in large numbers, buildings to be equipped as comfortable havens for Belgian refugees. In all these cases the work could not have been carried through so expeditiously and so well, had it not been that gas-mains are everywhere to-day, and gas apparatus can consequently be easily and quickly connected up and put in working order. It should be noted, too, that in many cases the work was done free of charge, or at specially arranged terms.

The Adaptation of Factories to Wartime Needs.

Let us turn now to the industrial side. As Mr. H. M. Thornton recently put it in a paper read before the Royal Society of



COOKING APPARATUS PROVIDING MEALS FOR 600 EMPLOYEES.

Arts, "Numerous and complex problems faced the engineers and manufacturers of this country anxious to respond to the call for 'Munitions, more munitions, and still more munitions.' In many cases it was the problem of an immediate and enormous increase on normal production; in many others it was the problem of converting factories from the production of peace-time commodities to the turning-out in vast quantities of war-time necessities. Whatever the circumstances, the demand was for increased productivity, largely multiplied on ordinary output, and this was required to be achieved with the utmost speed, and in the face of an already heavy withdrawal of labour for military requirements. Under the stress of this need of maximum quantity for minimum labour at maximum speed, many a manufacturer requiring a heat-treatment process—and heat is a well-nigh universal necessity in manufacture—sought and found the solution to his problem in the use of gas."

In the first place, the volume of available labour was reduced and the gas furnace economised this valuable commodity, inasmuch as no stoking or clinkering was required, no ashes had to be removed, and no fuel to be transported or stored. Secondly, existing factories had to be utilised to the full extent of their capacity; for even the enterprise of the Ministry of Munitions could not raise new ones from the earth in the space of a day. The gas furnace, compact, self-contained, and mobile, gave economy in space and made possible an increase in output per unit of factory area. No special structural alterations to the factories thus fitted became necessary; neither smoke-stack nor fuel-store was required; and the choice of position for the furnaces was practically unlimited. It should be added that these considerations applied with great force in the case of firms hitherto manufacturing non-essentials and on the outbreak of war wishing to take up Government work. As an example of this may be instanced a company manufacturing gramophones and other musical instruments. Gas furnaces were ordered, and in a few days the shop had been transformed into a highly important adjunct to our Army supplies, turning out millions of steel cartridge clips a day. Similarly, manufacturing silversmiths in the Midlands found their shops and plant readily adaptable, with the aid of gas furnaces, to the pre-heating of brass pellets to be stamped into fuse-bodies.

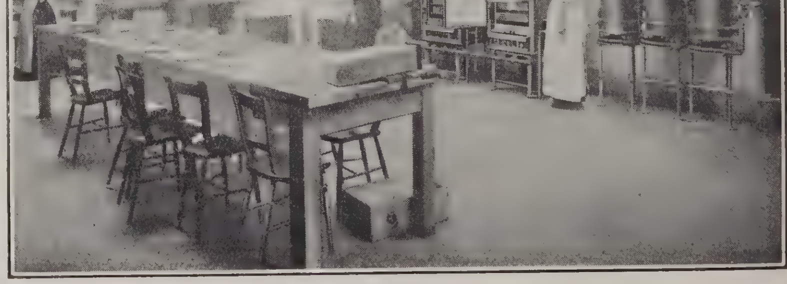
In the third place, the most vital need was for instantaneous acceleration in production—an end to which the use of gas apparatus, easily controlled, constant in action, and increasing the number of operations per working day by anything from fifty to a hundred per cent. largely contributed. A typical example of the combined saving effected in all these various directions is the fact that in large munition works it has been found that gas furnaces for heating cartridge clips, as compared with coal-fired furnaces of similar size, take, on account of their uniformity of temperature, 33 1-3 per cent. more clips, reduce the length of the operation by another 33 1-3 per cent., and also occupy only one-third of the space, the result being that munition makers have actually multiplied their output on the same floor space six times over by installing these gas furnaces.

The Human Side of Industry.

It must not, of course, be imagined that gas has during war time proved its worth only in regard to the heat-treatment of
munition metals: as a matter of fact, th
whole world of industry has felt the ben
ficial effects of the recent developments i
its industrial application, a subject c
which volumes could be written. The
is, however, one very important side
industry which perhaps deserves som
mention here—that side of it which tak
thought for the comfort and general wel
being of the workers. Herein gas is pla
ing an increasingly large part, not only
the provision of the baths and washin
facilities which the Committee on th
Health of Munition Workers so strong
recommend, but pre-eminently wi
regard to the establishment of canteen
which are now becoming a real feature
industrial life.

If a canteen is to be successful and pa
its way the food must be well cooked, th
cooking must economise the materi
used, the cost for fuel must be kept as lo
as possible, and the whole work must
performed with the minimum of labou
It was doubtless these considerations whi
led the Committee on the Health of Mun
tion Workers to state in a memorandu
on the subject that "where gas in suf
cient quantity is available, gas cooking
usually preferred on account of clean
ness, efficiency, and saving of labour."

The accompanying illustrations of ca
teen equipment speak for themselves, b
it may be of interest to give a few par
culars of a canteen fitted with gas-cookin
and water-heating apparatus in connecti
with one of our world-famous armame
firms. The canteen accommodates 6
persons and daily provides: (a) Early t
and hot milk for the night staff of 5
workers, (b) breakfast at eight a.m. f
450 workers, (c) dinners at 11.45 a
1 p.m. for about 400 workers at each s
ting, (d) teas for workers who come to t
canteen and for those who remain
other parts of the building, (e) suppers f
the night workers. All are served with
ten minutes of entering the canteen, a
yet the staff consists of no more than
lady superintendent, two cooks, two ass
tant cooks, six waitresses to serve at t
counter, and one or two scullery mai
Speed and economy of labour are gre
watchwords in industrial canteen work, a
are undoubtedly best secured whe
it is practicable to use gas apparatus.
may, in short, be stated that the gas i
dustry has materially helped to establish

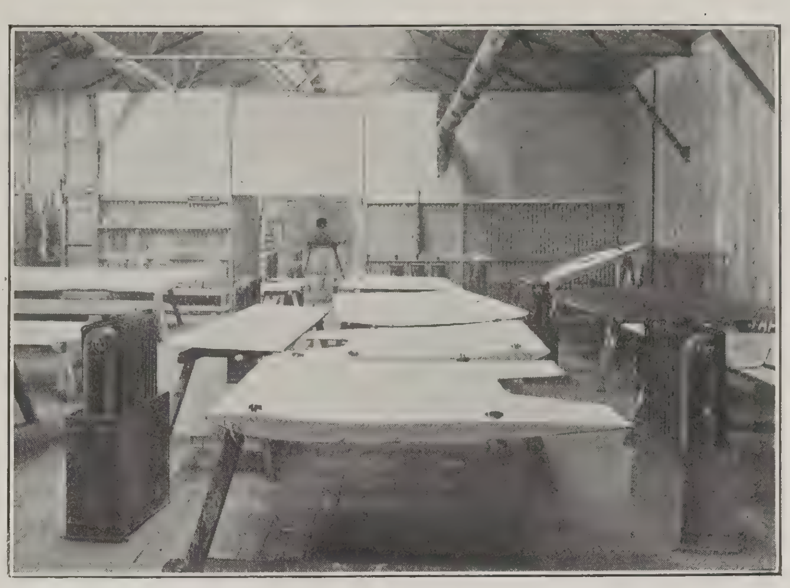


VIEW IN KITCHEN SHOWING THREE CIRCULATORS PROVIDING HOT WATER SUPPLY movement of which the Prime Minister has said: "I am delighted to see these canteens springing up throughout the workshops. That men should get their meals not in the old, squalid, uncomfortable conditions, but in conditions which are attractive and healthful, is better for the working man and for those who are in charge. It is better for all, and certainly better for the State. We are making a better country because we have the recognition that the interests of one section of us are the interests of all."

NATIONAL FEDERATION'S HALF-YEARLY MEETING.

The National Federation of Building Trades Employers of Great Britain and Ireland held their summer meetings in Liverpool on Tuesday, Wednesday, and Thursday of last week, a council meeting on Tuesday, a general meeting on Wednesday, and social functions on Thursday. Delegates to the number of more than hundred were in attendance, and the ladies by whom they were accompanied shared in the round of social functions which the Reception Committee had organised as supplementary to the business meeting, which took place in the Midland Adelphi Hotel on Wednesday morning, the chair being occupied by Councillor James Storrs, J.P. (Stalybridge), president.

The proceedings opened with an address of welcome from the Lord Mayor of Liverpool (Mr. Max Muspratt), who referred to the fact that the Federation emanated from Liverpool. The building trades, he said, had probably been more hardly hit than almost any other trade by the war. It was certain, however, that as soon as the war was over the building trade would be one of the first trades required for the work of reconstruction. The basis of the whole of our future dealing with the social problems and the wage problems was proper housing. It was for experts like his hearers to thrash out what was the best way of dealing with that problem—whether the municipality or the State should come in, or whether private endeavour should be supreme. The lead that that meeting gave to the Government Departments of the country would be of vital importance to the nation as a whole. As to the labour question, the Federation had had that under consideration, and if they were not the absolute pioneers they were in the front rank of pioneers in dealing with that problem in the only rational, sensible way. As a manufacturer, he knew the difficulties of the labour problem, but he did not think people half realised the enormous points employers and employees had in common. They talked about the points of difference, but on investigation they often found that the trouble which arose among tens of thousands of men was due to a little want of tact or management. That must come to an end. If there had to be fights between masters and men—and they ought not to happen more than once in a generation—let them occur only after every effort had been made by both sides to thrash the matter out to a settlement.



AEROPLANE FACTORY, SHOWING PATENT GAS STEAM RADIATORS FOR MAINTAINING HIGH TEMPERATURES.

(See page 51.)

Mr. T. Foster (Burnley), president of the North-Western Federation, in proposing a vote of thanks to the Lord Mayor, remarked that the building trades were one of the first industries to suffer during the war period, but their members had borne it all with the very minimum of complaining, whilst other industries had done a good deal of squealing. They would stick it out so long as the war lasted in hopes of those good times referred to by the Lord Mayor. The portions of his lordship's speech which they valued most were his references to the scheme which the Federation had in hand for bettering the relations of capital and industry.

Mr. Ernest J. Brown (London), past president, seconded. He said that if the building trade revived after the war in the way his lordship had predicted, they would look upon the Lord Mayor for life as the prophet of 1917.

The vote of thanks was cordially adopted.

It was agreed to adopt the seventy-ninth half-yearly report as presented, with the addition of an acknowledgment of the services rendered by Mr. E. J. Brown.

Some discussion arose on the paragraph in the report dealing with National Service.

Mr. Amphlet, after acknowledging the services of Mr. E. J. Brown, remarked that in the Midland centre they had found the success of the National Service scheme hampered largely from lack of knowledge on the part of the operatives. He spoke also of the apathy and antagonism of the operatives.

This latter experience was not confirmed by several subsequent speakers, two of whom, Mr. Macfarlane and Mr. Cooke (Preston) testified to the readiness of the labour element to associate themselves with the scheme, and Mr. Cooke held that if there had been any apathy at all it had been on the part of their own people.

Consideration was given to a form of sub-contract submitted for approval.

The President moved, and Mr. Willcock (Wolverhampton) seconded, that it be referred to a joint committee representing the Federation and the Institute of Builders.

An amendment was proposed by Mr. Brown (Chester) that the matter be deferred for further consideration. He argued that certain clauses in the form of sub-contract now presented might well be amended, and he further contended that many of the associations had not yet had an opportunity of considering it.

Mr. Bowen seconded the amendment.

Mr. J. B. Johnson (Liverpool) appealed to the delegates to adopt the form, pointing out that it had been approved by the

LARGE DINING-ROOM, WITH WOMEN AT DINNER.

(See page 51.)

Institute of Builders, by their own National Federation, and by the Confederation, whose constituent parts were the National Association of Master Plasterers, the National Association of Master Plumbers, and the National Federation of Master Slaters. The interests of sub-contractors had been well safeguarded by these associations. At present sub-contractors had no form of contract, and if the form now submitted was not accepted they would have to wait a long time before they got another.

The amendment was defeated by an overwhelming majority, and the form of sub-contract was approved.

The report of the Housing Committee stated that the committee had considered the progressive decline in the building industry during the last two decades, both as regards housing and other building works, and particularly with regard to the question of sound and satisfactory investment in both directions. They recommended—(1) the repeal of the Finance Act, 1909-10 (Part 1), to reinstate confidence in building as an investment which had been seriously impaired; (2) that the present system of rates for local and national expenditure be abolished, and the substitution therefor of the principle that all expenditure of a national character (but made through local authorities) be placed on national Budget to be met by income-tax, and all local expenditure for purely local purposes be similarly met by a local income-tax to be levied on all persons enjoying such amenities whose income was above the present tax basis; (3) an alternative proposal for the reorganisation of the rating authorities, with one authority to make valuations; (4) that the provision of cheaper land for building operations be made easier, and every encouragement be given for needed development; (5) that Government subsidies to meet increased costs of labour and materials should be granted to responsible persons, or loans issued at lower rates on security of properties in order to encourage building by private enterprise; (6) that public authorities should let work by contract and not by direct labour; (7) that building by-laws be overhauled, with a view to their being made less costly to the execution of housing work; and (8) that the construction of roads in connection with housing schemes be reconsidered.

Mr. Moffat (Birmingham) moved: "That this general meeting accepts the joint report of the Sub-Committee on Housing and Rating, on the reference made to them, for entry on the minutes, and expresses its conviction that the time is ripe for the National Federation to settle and adopt a definite policy and programme dealing with both subjects which can be put into operation by the various associations. This general meeting further appoint a committee to investigate fully and make recommendations concerning (1) the effect of the present system of rating on building operations generally, including its application to houses under £30 a year; (2) the present shortage of houses and methods for its removal and any question relevant thereto; with a further duty on the committee to advise and co-operate with any association on the policy to be adopted in a particular district from time to time." The building trade, said Mr. Moffat, was face to face with one of the biggest problems in its history. They wanted the settled opinion of

(*Continued on page* xiii.)

PATENT FURNACES INSTALLED IN A HARDENING SHOP.

(See page 51.)

(*Continued from page* 54.)

National Federation on this question, hat it could not only help but practi- y control the builders in any indivi- l town.

r. J. Davidson (Leeds) seconded the ion, with the reservation that the eration was not entitled to the policy down in the report of the sub-com- ee. He did not agree with the views he sub-committee regarding the inci- ce of local taxation.

r. S. Smethurst, J.P. (Oldham), said question of housing was one of the ost urgency. This was the view of Government, who had made up their ds to put aside a considerable sum of ney to be spent on housing in the im- liate future. They did not want the sing question mixed up with the other ortant question of rating, which had n a contentious matter for a long time, , moreover, was highly complicated. e Government were anxious to have ctical advice regarding housing. The ses of the future were not going to be lt as they had been in the past, and the ernment were prepared to co-operate n private enterprise wherever possible. the Government must have "some nion, and that opinion must be repre- tative. He proposed as an amendment two committees should be appointed, to deal with housing and the other to l with the incidence of rating.

Ir. S. Easten (Newcastle) seconded the endment. The shortage of houses he ibuted first to the operations of the ance Act, and, secondly, to the fact t a few years ago there had been so ch overbuilding. He complained of odium cast on builders as the persons ponsible for the present-day housing ditions. Some properties put up by nicipalities were not one whit better n the houses put up by speculative lders. He had the utmost respect for culative builders, who had been the ans of building houses for the working sses at the least possible cost. He sug- ted that speculative builders should be sidised by the Government for a period years in respect of housing operations.

Ir. Watkin Williams (Cardiff) was of nion that the report of the Housing nmittee should be referred back to the ministrative Committee, so that the stion of the reappointment of the using Committee should be considered them, together with new terms of erence.

Ir. Snape urged the importance of entralisation. The centralisation of lding under municipalities had proved abject failure. He suggested the for- tion of building boards throughout the intry under Government supervision.

Ir. Foster (Burnley) suggested that if working classes received better wages y would be better able to pay the rents houses fit for them to live in.

t was agreed that Mr. Smethurst's endment should be incorporated in the ginal resolution, which was then proved.

he scheme for the establishment of a ilders' National Industrial Parliament s next considered. The scheme, as mitted, provides for a "body represen- ive of trade union and employers' asso- tions" to promote the continuous and gressive improvement of the building lustry, to realise its organic unity as a at national service, and to advance the ll-being and status of all connected with

Mr. Smethurst, in proposing the adoption of the scheme, said it was the most important matter ever brought before the National Federation. It marked a new era in the relations between employers and employed. Why had they the present senseless and foolish industrial position? To be frank, the employing class quite unconsciously had brought about this condition of things. They had adopted a policy of resistance to the demands of the workers. On the other hand, the workers had adopted the policy of "ca' canny," or limited output. This was a demoralising system, but it could be defended from the trade-union standpoint. He looked forward to a future in which, instead of conflict, they would have co-operation between employers and employed, and when the human relation would be brought more closely into the activities of business life. That ideal, he hoped, would be achieved in their own industry through the medium of the National Industrial Parliament.

Mr. F. L. Dove (London) seconded. He submitted that the proposal represented the first well-considered scheme to be put forward for bringing all those concerned in the building trades into line for their mutual benefit.

The scheme was adopted unanimously.

A report by the Secretary (Mr. A. G. White) on inter-relations of building trade employers, showing how causes of friction and overlapping on trade matters might be avoided, was submitted and approved. Mr. White's services in drawing up the report were very cordially acknowledged.

The Courts (Emergency Powers) Act was next discussed and generally approved as being of benefit to the building trades. Thanks were also tendered to Mr. Rice for his Parliamentary services.

The interim report of a sub-committee of the Reconstruction Committee re joint standing industrial councils was generally approved.

The Executive Committee submitted a resolution from the North-Western Federation setting forth the opinion that industrial unrest was largely due to the action of unprincipled persons in exploiting the necessities of the people and calling on the Government to repress such course of action.

Mr Bertram Moss (Liverpool and Warrington Master Builders' Association), supporting the resolution, declared that nothing had proved more disastrous to the working classes than the excess profits duty. He suggested the abolition of excess profits duty where the business affected was concerned with household commodities, and that the profits of such businesses should be limited to pre-war standard. At present the working classes were being made to pay the excess profits tax.

The resolution was carried.

A further resolution, which was agreed to, called for the removal by the Government of provisions of the Finance Act, 1910, which it was contended had contributed largely to the present house shortage, and appealed for Government encouragement to private enterprise and co-operative endeavour in the matter of house building.

Change of Address.

Messrs. John Brooke and Elcock, architects, intimate that they have left their offices, 18, Exchange Street, Manchester, which they had occupied for more than thirty years, and that their new address is 178, Oxford Road, Manchester.

PROPOSED CARDIFF WAR MEMORIAL.

Mr. Herbert M. Thompson, J.P., of Whitley Batch, Llandaff, has issued a circular with reference to the form a war memorial should take in Cardiff, in which he suggests the erection of a beautiful fountain in the midst of the Alexandra Gardens in Cathays Park. The fountain, he says, should be one that would win world-wide celebrity, and he advocates a national competition amongst great artists and sculptors for designs, the ultimate choice to rest with some established and recognised authority in the particular form of art to be employed. Objection to a fountain on the ground that tablets recording names, dates, and regiments would accord ill with any purely artistic scheme can be met by surrounding the fountain with a path, at the other side of which should be an ornamental dwarf wall, perhaps curved in such a way as to suggest an outermost rim of the fountain basin. On this, or on panels inlaid in it, the names might appear. The Cathays Park scheme may eventually mean to the city a great deal more than a well-disposed group of fine buildings. It will (says Mr. Thompson), when the re-modelling of Duke Street has given it a worthy approach and one of historic interest, be something for the whole community to be proud of, and will form a centre for what is most treasured as the corporate life. A great object like the commemoration of those who had fallen in the war ought to find expression at the central point of interest in the city's great civic enclosure.

ENQUIRY ANSWERED.

Strength of Superimposed Rolled Joists.

Reader (Manchester) writes: "As the existing shortage of constructional steel compels the occasional use of superimposed joists, I shall be glad if you will kindly give me in your next issue the calculation to determine the pitch of ⅝ rivets necessary for connecting two 6 by 5 by 25-lb. joists, flange to flange, the riveting to be sufficient to develop the full strength of the combined section for a clear span of, say, 12 ft."

—When two equal superimposed rolled joists are sufficiently riveted together, calculation shows that the combination will have two and a half times the strength of one of the joists alone, but it takes up twice the depth; whereas if the two joists are used side by side, or one over the other, without riveting, the combined strength will be twice that of a single joist, and the depth occupied will be a minimum. A 6-in. by 5-in. by 25 lb. rolled joist will carry safely a distributed load of 6.05 tons over a span of 12 ft., and 6.05 × 2.5 = 15.125 or, say, 15 tons safe distributed load when two are riveted together one over the other. The maximum shear stress will be $\frac{15}{2} = 7.5$ tons at each support, and $7.5 \times \frac{2}{3} = 5$ tons horizontal shear per foot run. A ⅝-in. rivet has a sectional area of 0.3 square inches, which at 5 tons per square inch shear stress gives a safe stress of 1.5 ton on each rivet. Then $\frac{5}{1{\cdot}5} = 3\ 1\text{-}3$, say, four rivets per foot run, or 3-in. pitch on alternate sides, making 6 inches pitch on each side.

Henry Adams.

PUBLISHER'S ANNOUNCEMENT.

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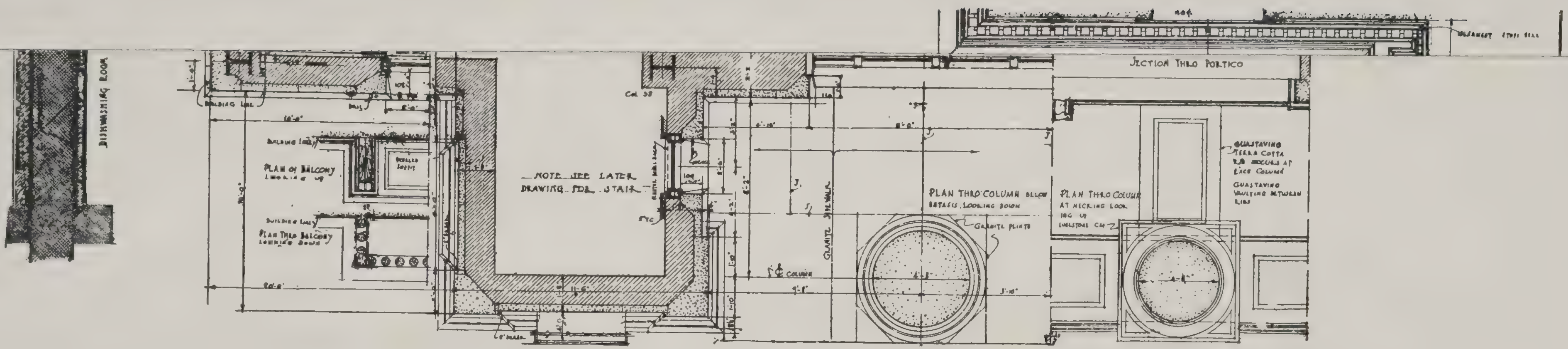
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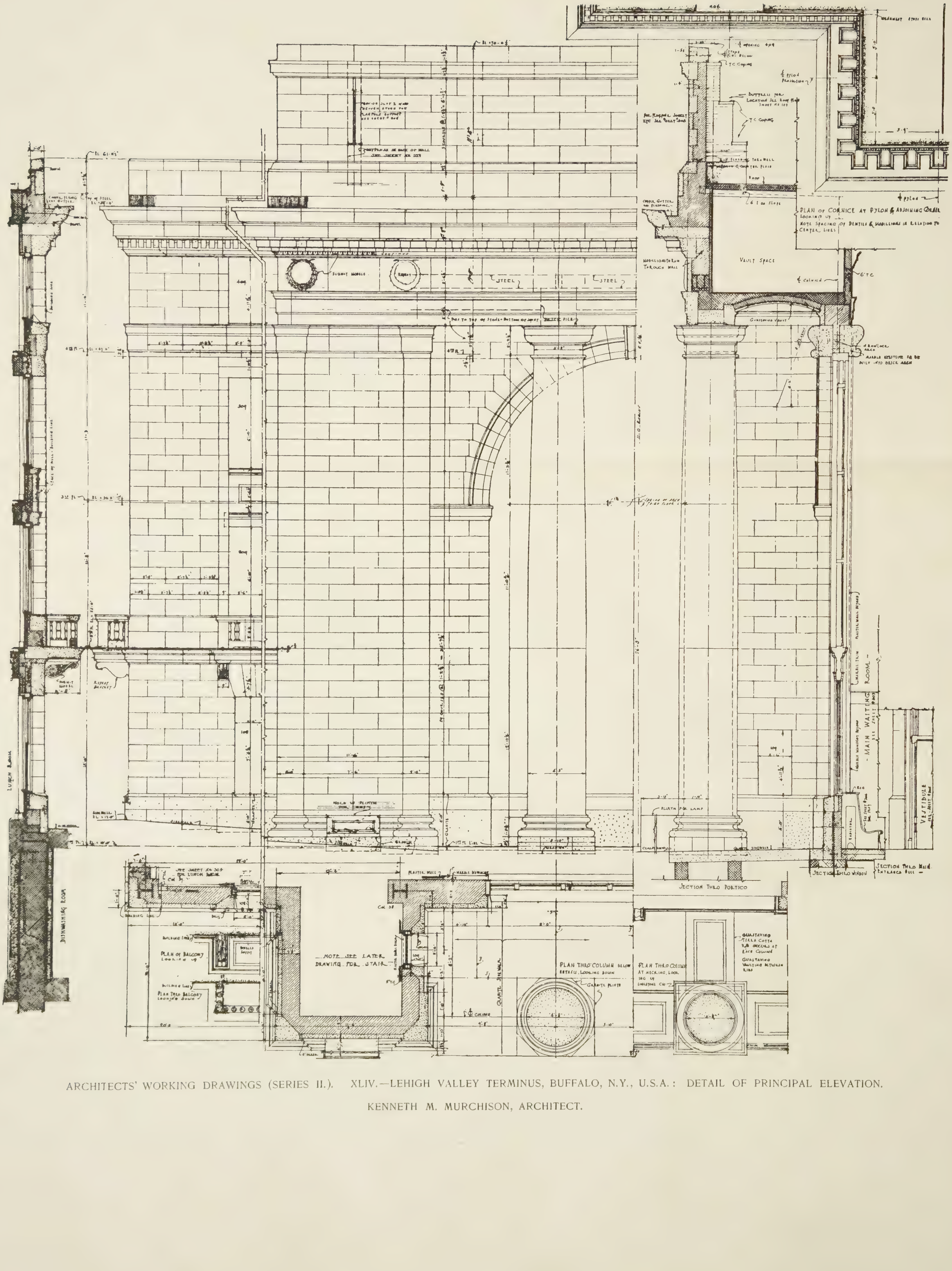
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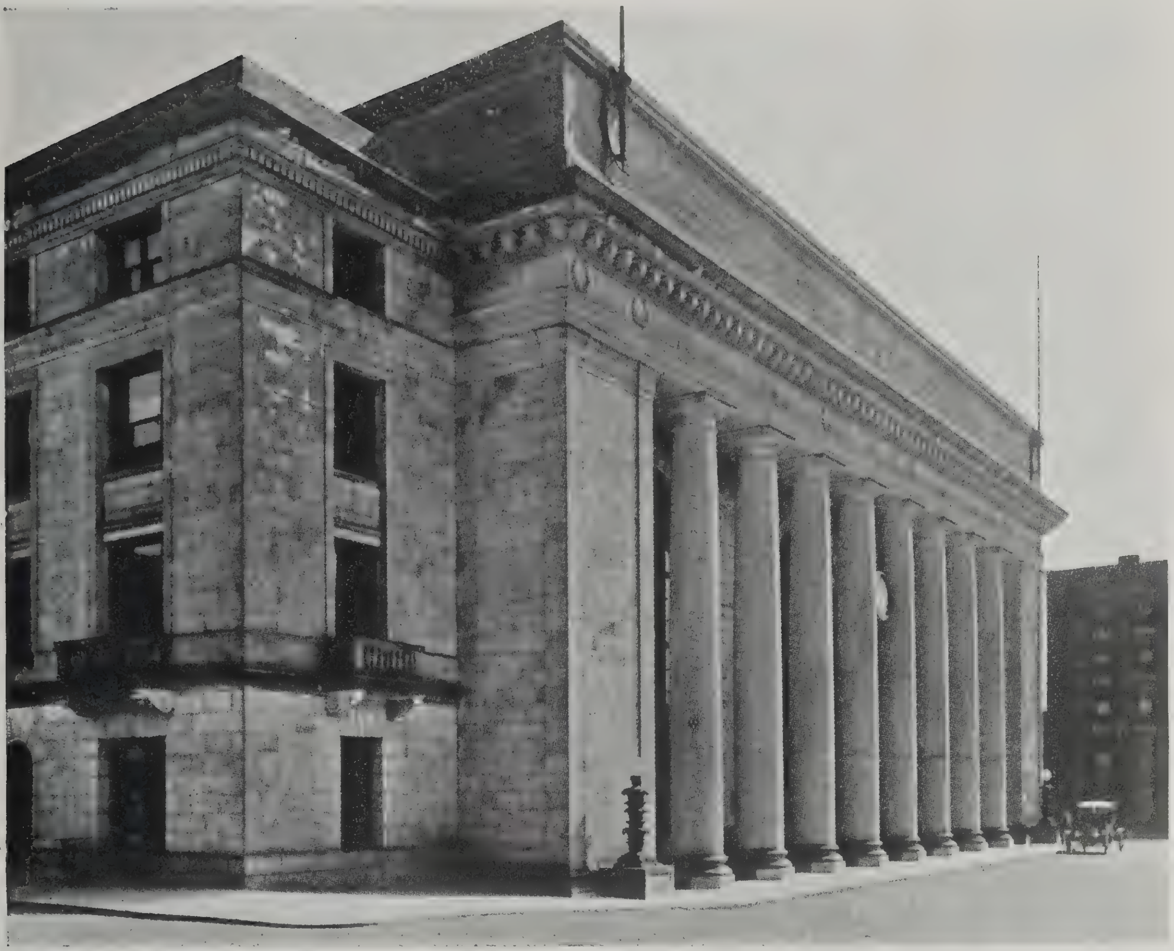

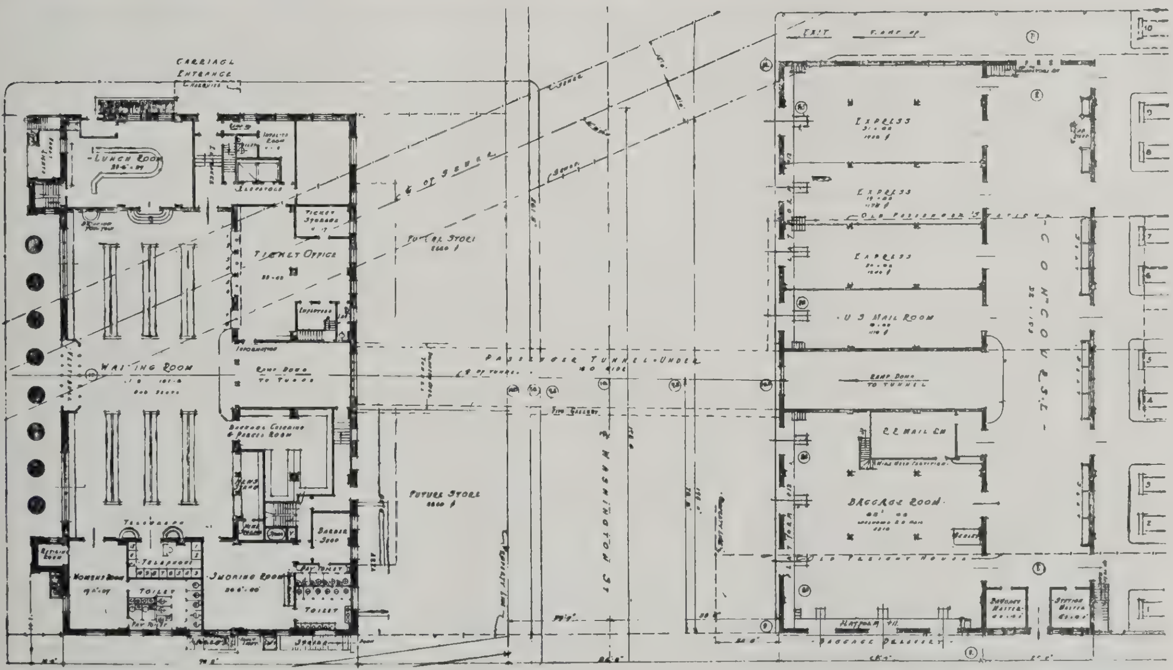

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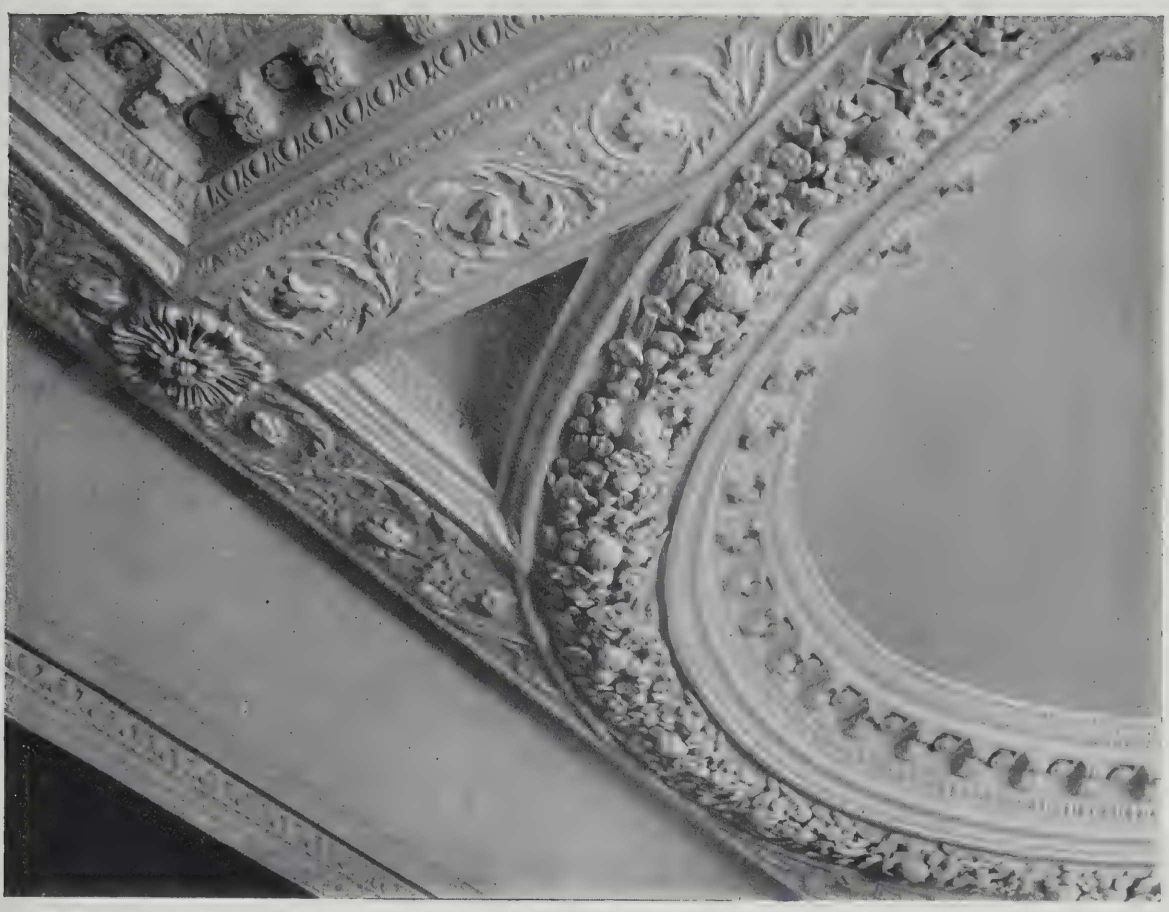
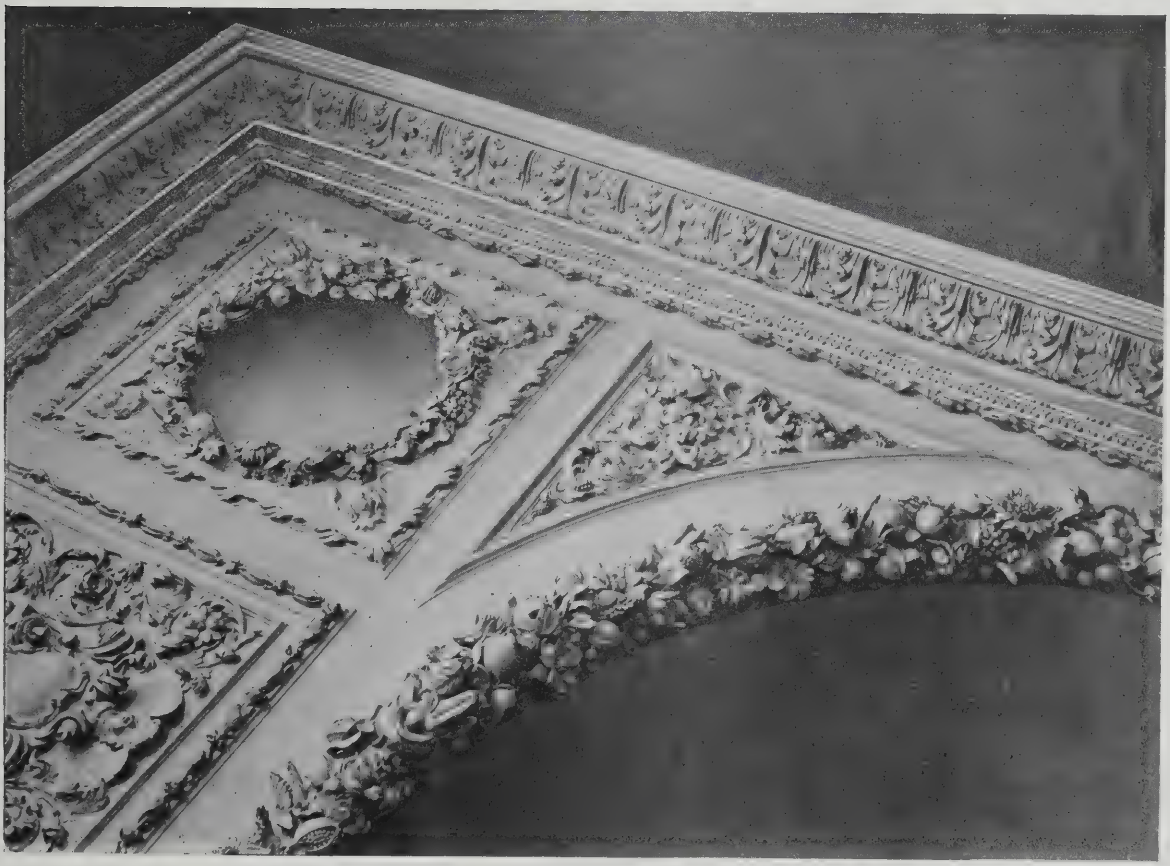
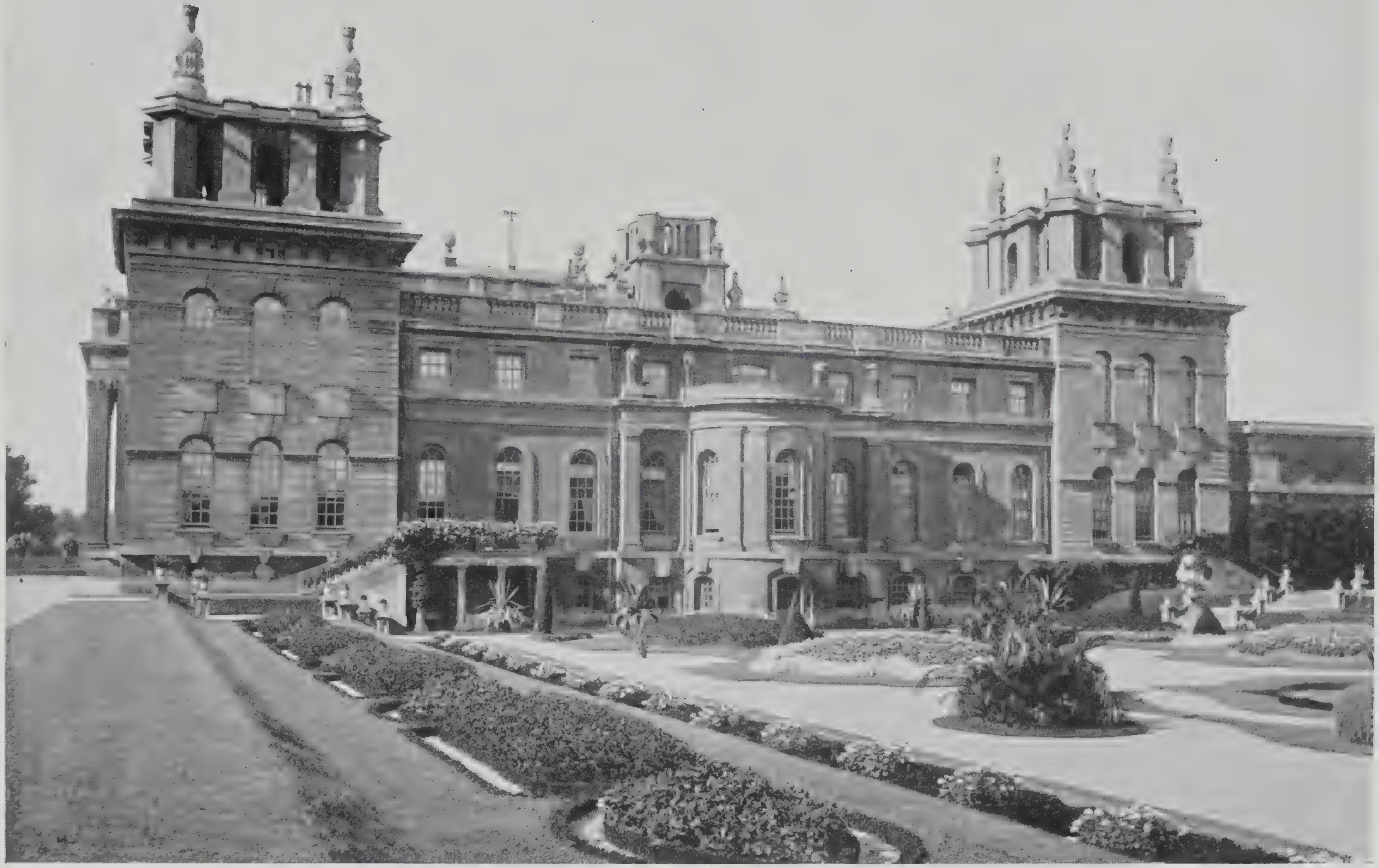


Detail of Ceiling in Great Drawing-room.



Detail of Ceiling in Busby Library.

DETAILS OF CRAFTSMANSHIP (SERIES II.). XXXIV.—CEILINGS IN ASHBURNHAM HOUSE, WESTMINSTER.



MONUMENTAL ARCHITECTURE (SERIES II.). XVII.—BLENHEIM PALACE, WOODSTOCK, OXFORDSHIRE: EAST ELEVATION.

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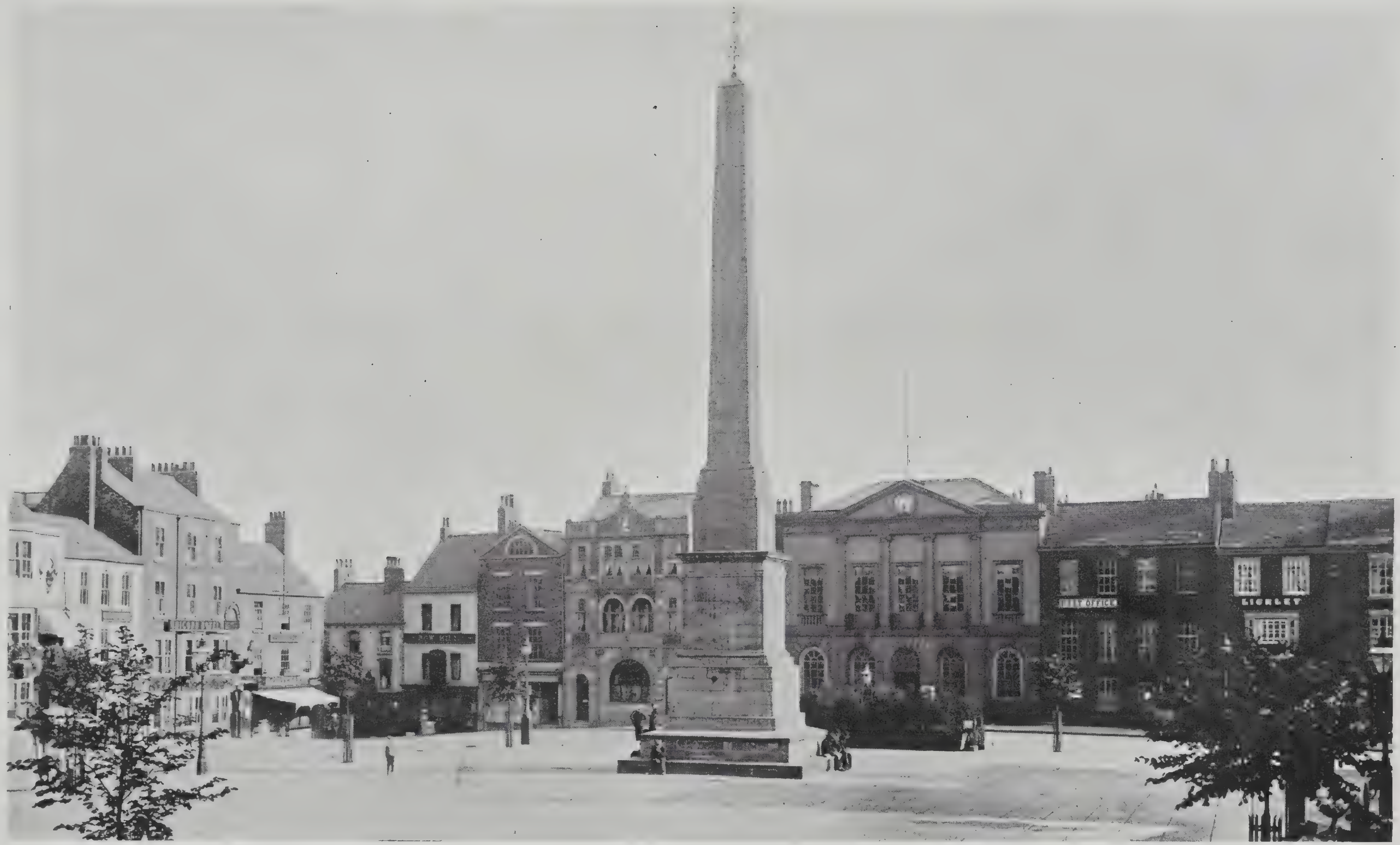

MONUMENTAL COLUMNS AND OBELISKS. X.—OBELISK IN THE MARKET PLACE, RIPON.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

AUGUST 8, 1917. *TOTHILL STREET, WESTMINSTER.* VOLUME 46. No. 1179.

the House of Commons on July 30, Lord H. Cavendish-Bentinck again raised the question of the reconstruction work at Silvertown. urged that the work had been carried out a manner prejudicial to the health of the ple. In reply, the First Commissioner of rks denied the imputation, and refused to ept any blame in the matter. If, he said, he had n indifferent, he need not have taken any action at but, wishing to facilitate the rehousing of the ple, his Department promptly repaired 900 houses. far from any reproach attaching to his Department, had received unsolicited testimonials from more four hundred of the inhabitants. Sixty per cent. he workpeople's houses in London, he declared, e constructed exactly like these houses at Silver- n. What Lord H. Bentinck really wanted, said Sir red Mond, was that the houses should be pulled n and rebuilt for the landlords. This is feeble and talk. It is worse. It hurls a gratuitous insult at head of a man who is simply performing a plain lic duty. "No case: abuse the other side," is a iliar enough formula, but one does not expect it to applied by the head of a Government Department. *Qui s'excuse s'accuse.* That the Department need have done the work at all is no excuse for doing it ly; and Sir Alfred provokes the retort that it would e been better to leave it undone—if the Department dared—rather than to do it in such a way as to uce the head of the Department to so desperate a of defence as that 60 per cent. of the workpeople's llings in London are constructed with exactly the e disregard for a first principle of sanitary building hat the foundations should be dry. This is no bt "an ower-true tale," and it explains why doctors unable to stamp out consumption and other pre- table diseases. Sir Alfred is insistent in claiming dit for the action of his Department, and we are y anxious to give them every jot and tittle that is ir due; but unfortunately there is a heavy balance the other side, and Sir Alfred cannot cancel it by uting hypocrisy to those who simply perform a lic duty in calling attention to it.

* * * *

ost remarkable of all the suggestions for war norials is the proposal to leave Reims Cathedral in is "as a perpetual monument to German ignominy." lin and Edmond Rostand are said to favour the idea husiastically, the former declaring "that such a nument as the devastated cathedral would be the st sublime souvenir of the war it could be possible imagine." But would not such a monument be ner morbidly theatrical? It might appeal to the ersensitive artist and the romantic dramatist, but it ld be intolerable to the average healthy-minded zen, and the citizens of Reims are said to be gene- y and strongly opposed to it. That the cathedral been destroyed beyond all possibility of restoration been often asserted and as frequently denied. Not there is any physical difficulty that cannot be easily rcome. Drawings and documents, and consum- e skill in following them, would assure the reinstate- nt of every detail; but its glory has departed its it fled, and the restored cathedral would be but little ter than a monument to twentieth-century clever- s. Even so, it would be a more sightly thing than ruesome reminder of Hun frightfulness: and the d course of pulling down the remains and erecting a brand-new cathedral would find but little favour anywhere. From every aspect it is a melancholy business; but the "romantic ruins" solution of the problem does not seem to appeal very strongly to anybody lacking the poetic temperament.

* * * *

At length, and not a moment too soon, the Government has got to grips with the housing question. A circular of inquiry has been addressed to all the municipal authorities, and Mr. Hayes Fisher, President of the Local Government Board, is said to have formed a committee to deal with the whole question of working-class housing. An unofficial list of the appointments to this committee comprises ten names, including those of Mr. Raymond Unwin and Sir Aston Webb. At present the manner in which the financial assistance which is now definitely promised by the Government is to be allocated is necessarily left undecided, nor can its extent be stated until the replies to the circular have been gathered and digested. It is unfortunate that the circular should have been sent out in the summer season, when councillors and officials are resting, for many of the returns cannot be made until the vacations are finished and business is resumed, and this must imply in many instances, a delay of several precious weeks. It is certainly better, however, that the circular should have been issued at the earliest moment, even though that happens to coincide with the dead season, and on this score there is therefore no real ground for complaint. October 15 is the date on which the forms accompanying the circular are to be sent in, and it is to be feared that the officials of local authorities who have not taken time by the forelock—have not gathered the required information in advance of a request that was generally foreseen—will suffer a rather considerable disturbance of their vacation arrangements.

* * * *

There is sure to be an outcry about the "bad finance" to which the Government must be inevitably committed when or if it has to borrow money at 6 per cent., and re-lend it at three and a half for housing; but this is a case in which the mere pedantry of finance must give way to more purely humane considerations, to a higher morality than that which can be easily expressed in figures. Persons who have become wofully short-sighted from constant and minute analysis of ledger accounts have wrought much harm to the housing problem, which their pettifogging interference tends rather to complicate than to solve. To them, any breach, however slight, of the rigour of the game, is anathema. State aid, in any form, is, from their point of view, little short of wicked, and to lend money at a less rate than that at which it has been borrowed is criminal lunacy. It is the same type of mind that insists on housing being adjusted to wages, instead of adjusting wages to the cost of houses. Mud huts, if you please, were to meet the case of labourers who were so badly paid that they could not afford the rent of more substantial dwellings! And now comes the cataclysm which will sweep away all this solemn nonsense. State aid is definitely promised. As soon as the stick-in-the-mud school of housing recovers from this shock, it will endeavour to burke the enterprise. Its attitude on this question was typically exhibited by a leader-writer in a London newspaper last week, who dealt in the customary way with a claim put forward by the workers. "A committee of Labour representatives," he writes, "has put forward a programme of house-building which is characteristic of the spacious times in which we live. A million houses are to be built, either by the local authorities with a subsidy from the State, or by the State itself. They are, of course, to be let at low rents, and the loss is to be borne by the taxpayer." This conventional method of arguing seems to figure "the taxpayer" as a sort of unique Atlas, bearing a world of financial burdens on his back. It is convenient to ignore that everybody outside a prison, a workhouse, or a lunatic asylum, is a taxpayer, and that if direct taxation is heavy, indirect taxation becomes automatically much heavier still.

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Then the leader-writer introduces the old familiar plaint, "Nor is it easy to see why the nation as a whole should be called upon to shoulder the burden of providing houses at less than cost price for a million favoured persons and their families." None are so blind as those who will not see. Spontaneous cure of this infirmity usually ensues upon the removal of the blinkers that procure such narrow views. Why the nation as a whole is thus called upon is because the nation as a whole is responsible for the present lamentable condition, and because the nation as a whole will reap the benefit of the expenditure—for pretty much the same reason that the nation as a whole builds barracks, police-stations, jails, schools, Government offices, and Parliament houses. Government is going to assist in housing the workers because it must—because "these favoured persons and their families" are indispensable to the country in peace and war, and because what these people cannot do for themselves must be done for them. Apparently the blinkers have prevented this writer of reactionary leaders from observing that somewhere or other there is a hole in the social saucepan—nay, that it is a veritable sieve, well-nigh past tinkering. "Favoured persons" indeed! What a cruel sarcasm that would be if it were not merely a worn-out cliché! All this harping on the sordid, pecuniary, selfish, sectional aspects of a vital national problem is not merely mean and paltry: it has the fatal flaw of being clean out of date. A new spirit of fellow-feeling has arisen from the exigencies of the war, and current views of the housing question have been most powerfully influenced by that spirit.

* * * *

It has been averred, however, by a writer who has evidently discarded his blinkers (if he ever had any) and is looking all round the subject, that "had this conflict with Germany never occurred, it is clear that the State would have had to intervene." That State aid was a foregone conclusion we said repeatedly, years before the war; when, also, we lost no opportunity of contending that the true solution of the problem could never be reached by strained efforts to degrade housing to the depraved level of inadequate wages. There must be no levelling down, but a steady levelling up. It is with this aspect of the problem that we are now chiefly concerned. To put the matter into a single phrase, we are dead against the degradation of building—not building *per se*, but building as the symbol and the effective basis of national prosperity. As are the houses, so are the people. It is now recognised more clearly than ever that society has not treated its workers very well—that it owes them some reparation. In subsidising housing, it is simply paying them back a small instalment of the great unacknowledged debt it owes them, and is doing very well for itself in making the advance; for our country simply cannot afford to have a badly, nor even an indifferently, housed population. Good housing is good policy, and to obstruct it is unpatriotic.

* * * *

But surely we are all agreed upon these points. All that is at issue is the question of ways and means. Nor is it to be supposed that these State doles are to go on indefinitely. If all goes well—if through such agenc as the Builders' Parliament, the workers are in the ne future to earn and receive a better proportioned sha of the fruits of industry—they will not need, and w scorn to accept, State grants, which are but a te porary expedient to meet an unparalleled crisis: to t lame man his crutches, which in due season he w joyfully discard. That this is an emergency measu is one of its dangers. There will be the grea temptation to rush up inferior buildings. But t temptation must be resisted at every manifestati To cover the country with cheap houses of bad co struction and worse design would be a nation calamity. Standards and models will no doubt be have, indeed, already been—set up, and are perha necessary in the circumstances, and this is an ill con quence of neglect and hurry and panic that must endured. But the line must be drawn at that. plea of emergency, or so-called economy, must allowed to cloak building that is positively a demonstrably bad or mean and base. With the id of a rather rigorous censorship we have been ma familiar; let it be extended to the design and constru tion of houses for the workers. And let the mone lending and the building be done with courage a faith.

* * * *

One consequence of the nationalisation, or ser- nationalisation, of housing must surely be some sort standardisation of the by-laws. Many local by-la are almost ludicrously burdensome to builders, and correspondent of a provincial newspaper shows th they are equally annoying to manufacturers. venture to say," he writes, "that, no matter where y go, every town and city, large or small, has its o special regulations all differing from one another, a almost all trying to outdo each other in fads a fancies. What is the result? Well, manufactur are put to the enormous expense and trouble of havi special patterns for nearly every town in the count Especially does this apply to water regulations a fittings." One reason why water fittings are son times "outrageously dear," he says, is because, bef any manufacturer can attempt to make fittings certain towns, he has to pay some association for licence, the privilege of manufacture being confined one or two firms. This is a matter that calls for cl investigation. If it is indeed true that any articl water-fittings or what not, are rendered "outrageou dear" by an artificial inflation of prices, and if this i consequence of the use of such articles being comp- sory in certain towns, then the general need for by-l reform is curiously, not to say luridly, illuminated.

* * * *

Orange Street, Leicester Square, where a n Congregational church has just been completed, tak its name, of course, from the Third King William, w was Prince of Orange, after whom the Orangem named their politico-religious secret society. Next the old church, which was built in 1688 and demolish in 1913, stood the house which was the last residence Sir Isaac Newton, the greatest of the world's natu philosophers. Dr. Burney, father of the delecta Fanny, afterwards occupied Newton's house, and h daughter wrote "Evelina" there. If, as see probable from an anecdote in Boswell's Johnson, I Burney thought that Newton died there, Burney w mistaken, for Newton died at Kensington in 1727. the way, Newton's discovery of the new calculus w disputed by Leibnitz, who claimed priority. Germa always do that. Hardly any invention, or scienti discovery, has been made without the Germans clai ing that they had anticipated it. Colossal vanity probably the root of their inveterate and systema untruthfulness.

HERE AND THERE.

is rather disappointing that no response has been made to Mr. Arthur Keen's request for information concerning Mr. John T. Emmett. We would know more about a writer who, in the 'seventies 'eighties, created no small stir in the domain of itectural criticism. He has been likened to a ashbuckler, swashing on his buckler," but I should er to regard him in the more familiar similitude of gging batsman, lashing out all round the wicket, nearly always picking out the right ball to hit, and ing many beautiful boundaries—distinctly a ul man to have in the team, if a little unorthodox yle; sometimes scoring heavily, but often paying penalty for a rash stroke. If, while much of his ructive criticism was sound, he was weak when he yed construction, small blame to him. What was ever equally attractive at the positive and tive poles of his ill-starred industry?—Ruskin, aps, for he over-praised almost as often and quite oquently as he over-blamed.

* * * *

was a convention of the day in which Mr. Emmett e that an author must provide himself with some hstone of truth, some universal solvent, some ral contention, which should be recognisable as liarly his own, and to which all his data should eferable and subservient. Macaulay is per- the supreme instance of this vicious habit orcing the facts to fit the preconception. Emmett's pleasing obsession was that archi- re was all wrong because there were itects. In the period when building was at its there were no architects. When it was at its very t (as contemporary architecture always is, and ys was) there were legions of architects, who led themselves together in societies to do evil. al, architects ought to be suppressed, painlessly if ible, or ought at least to avert calamity by calling selves by some other name—some name that is abu. One remembers to have read somewhere—ably in Dr. Frazer's "Golden Bough," or in some offshoots—that, on certain occasions, to name a or a thing will bring bad luck, as it does in the se of Commons; and if, in setting forth to fish, nstance, anyone happens to mention the word ," the boatmen hasten to shore again, lest a worse happen to them. Mr. Emmett seems to have ited this quaint superstition. Apparently he ves that no man banned with the appellation hitect" can ever design a decent building.

* * * *

inus was no architect; he was "a cunning master- ler, the working head of a band of working men." was with our own old churches and cathedrals: designs were all set out by master-workmen. ere is, in fact, but little record of design at all; the , as we are told, was 'built,' and that included is now called the design." Mr. Emmett seems sure about it. Why, indeed, should he not be? one single strainer of Ictinus's has come down to o, by Jupiter! nor even his brass doorplate. All we have of him is his monument, more enduring brass, the Parthenon, which, apparently, he built children build grottoes in oyster-time. Oysters est Shelley. Hail to thee, Ictinus, "that, from en, or near it, pourest thy full heart in profuse s of unpremeditated art." How jolly to build that! But supposing the client did not like the ing when it was finished? In the leading case of ce Ventimore, who was commissioned by a multi- naire to build a gorgeous mansion, the architect ly allowed a geni to build the palace without , and as the geni was of Oriental extraction—Ventimore had extracted him from a brass bottle—the drainage system scandalised the sanitary inspector. Little accidents like that seem inevitable with such free-and-easy methods. And the consideration of stresses and strains after the building is up, and especially after it has come down more quickly than it went up, will come too late to evoke much sympathy from the jury at the inquest. They would put an absurdly literal modern construction on the expression "cunning master-builder."

* * * *

Then, as Mr. Emmett says, "architects are not the only plague that desolates our buildings; the lawyers also have smitten them with a paralysing stroke." Mr. Emmett would eliminate the lawyers, enfranchise the leaseholds, and let every man build his own house on his own land. The average workman would, it is to be feared, make a botch job of it, because the system of leasehold tenure has sapped his profuse strains of unpremeditated art. Consequently, "there is nothing that a Londoner will so strenuously condemn as his abode; and this is an excusable result of all the troubles and inconveniences that his house inflicts on him. The house in question is generally a wooden booth, covered at the top with slates, enclosed around with a thin film of brickwork, and daubed about with plaster." It is an ingenious misrepresentation; but, on the whole, one prefers the terser description (author unknown) "brick boxes with slate lids," which has the merit, for controversial purposes, of being still more grossly untrue. Mr. Emmett goes on, "It can hardly, in fact, be called a building, and for its size it has far less strength and stability than the furniture it holds." That must have been written before the sham Sheratons came to bless us. Mr. Emmett could hardly have met with the now too familiar tragical comedy of the fat aunt or uncle, the collapsed chair, and the forfeited legacy.

* * * *

Mr. Emmett did not like leasehold tenure, which, "with its gambling speculation, extensive and often fraudulent building agreements, its heavy law-costs, complicated mortgages, re-leases, re-mortgages, and second charges, its doubtful titles, and dreary waste of title-deeds, the risks of forfeiture, and the shortening term, forbids prudent men of business to erect substantial well-built houses." There can be no hope, he declares, "that working men or their employers will be well and comfortably housed until this insecurity of tenure is removed. The enfranchisement of leaseholds and their absolute prevention would do more than anything whatever to improve the dwellings of the whole community. The architectural, social, and political effect of such enfranchisement would be immense. Workmen would build for themselves, and interchangeably for one another; and those who are not workmen, seeing the superiority of the work done by the bricklayer or mason, smith or wright, for himself or for his fellow-workmen, over the ordinary task or day work of the drudging mechanic, would dispense with architects, surveyors, and builders, and all the class of middlemen, and would have their houses planned and built exclusively by local working men, with whom, as well-informed and interested artisans, they could directly and conveniently confer. Art and its employer would go hand in hand, equal, mutually respectful, and confiding, giving no place or opportunity for unions or strikes, or international societies." It is "a dream, and yet not all a dream."

* * * *

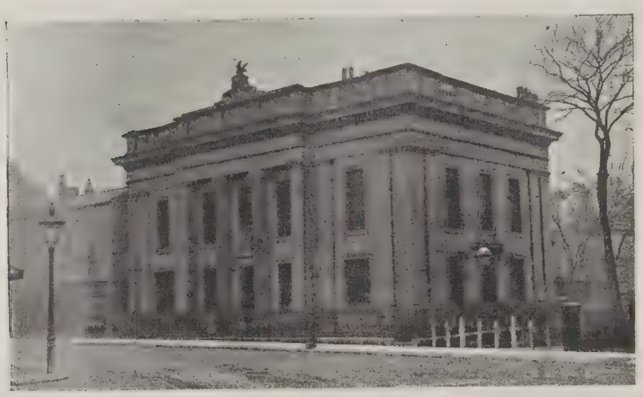
Hitherto I had been, I must confess, strongly in favour of land-tenure reform; but if it is going to entail the heterogeneous consequences Mr. Emmett predicts, I would rather keep things as they are. In ironic denunciation, Mr. Emmett is very amusing, and, on the whole, very astute; he was, indeed, a most interesting writer, his style being always scholarly, fluent, forceful, and straightforward—occasionally brilliant. He believed in a bold black outline, unshaded, and without the slightest delicacy of curve. But his craze for craftsmanship, the preposterous claims he advanced in respect of what he thought it had done in the past and could do in the future, sadly discount him as a serious critic. Nevertheless, as a "slogger" after the manner of Cobbett, he put in some really effective strokes when they were badly needed.

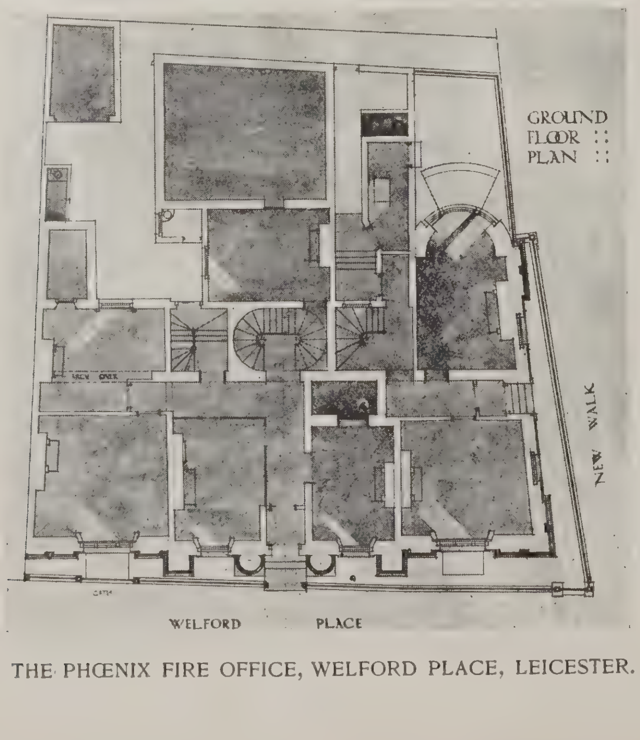
DIOGENES.

THE PLATES.

The Phœnix Fire Office, Welford Place, Leicestér.

THE Phœnix Fire Office, Leicester, of which a number of admirable measured drawings, by Mr. A. J. Wood, A.R.I.B.A., are illustrated in this issue, was erected from the designs of William Flint, of Leicester, in 1842, and was originally the Leicestershire and Midland Fire and Life Insurance Company's Office. It is a typical example of architecture of the period of the "Greek Revival," of which there are several others in Leicester, *e.g.*, the Theatre Royal in Horsefair Street; Baptist Chapel in Belvoir Street; several buildings on the New Walk (of which two houses opposite the Museum are particularly pleasing); the Old General News Room at corner of Belvoir Street and Granby Street (now demolished); the Old Free Library in Belvoir Street; and many others, includi house and shop fronts in the busy and central parts the town. Its quiet, dignified, and refined style mak it a building well worthy of study. The facing is stucco, painted a dull yellow colour; certain details, t balustrade, window sills, etc., are of stone, painted. is interesting to note that the Order is adapted fr that of the ancient Greek Temple of Minerva Polias Priene. Certain modifications call for comment, su as the unusual proportion of the entablature (its de is about one-third of the total length of columns) a the smallness of the capitals to the columns. Wh the Sun Fire Insurance Company had their quart here a fire engine was kept in the eastern portion— archway indicates the opening in the wall made for





THE PHŒNIX FIRE OFFICE, WELFORD PLACE, LEICESTER.

Monument of Giuliano in the Sacristy of San Loren Florence.

Michelangelo's activity in connection with Medicean monuments, one of which—that to Giulia —is illustrated in this issue, falls under two periods years. In 1520 he was asked for plans by Cardinal Medici, son of Julian and nephew of Lorenzo the El and afterwards Pope, under the name of Clement V who had resolved to build a new sacristy, contain monuments to certain members of his family, as a co panion piece to Brunelleschi's sacristy, which contai the tombs of the earlier Medici. In 1521 Michelang fetched the necessary marble from the Carrara Mo tains, made a small model of the statue of the Madon and submitted his schemes to the Cardinal, who not satisfied with them. Michelangelo then offered execute wooden models of the monuments; but i not known whether he actually did so or not. work was actively commenced on Cardinal de Medi election to the papal throne, Michelangelo beginn in 1524 the two figures of sitting warriors, "Captains," which, though presumably not port studies, have received the names of Julian Duke Nemours and Lorenzo Duke of Urbino, respectiv cousin and second cousin of Clement VII., and son grandson of Lorenzo the Magnificent. In the 'twen of the sixteenth century the new sacristy work interrupted by the complications concerning monument of Julius II., which Michelangelo had l previously begun in Rome, and by political eve including the siege of Florence, in which Michelang took part against the allies of the house of Me After the final establishment of the Medicean domi tion, Michelangelo was called back to the work Clement VII.. on whose death, however, in 1534, left Florence for good, his intention of never return being clearly expressed in certain of his lett Documentary evidence is lacking to show that monuments were left by Michelangelo in the condit in which we see them now. The two figures w recline rather perilouslv one on either side of sarcophagus are symbolical of Night and Day.

South Elevation of Blenheim Palace.

The south front of Blenheim Palace suffers f defects similar to those that are found in the princ elevation, to which, indeed, it is more or less a coun part. The same proportions are maintained, and same method of composition is observed. The n obvious defect of the south front is that the colu are too high in proportion to the remainder of façade, and are spaced too closely together. whole effect of the middle portion of the composi is uncomfortable and cramped. The wings on ei side are plain though dignified in design, but the pavilions emphasise rather unhappily the differenc scale and treatment of the upper storey.

Welsh National Memorial: Pont-y-Wal Sanator

This building, portions of which are illustrated a working drawing on the double-page plate in issue, is described in the article which appears page 62.

FROM CHARING CROSS TO PUTNEY.[*]

BY W. D. CARÖE, M.A., F.S.A., F.R.I.B.A.

'HE artistic disadvantages of a prominent glazed area between the stations ("Waterloo" and "Ypres"—see page 49, last week's issue) are ally obvious. These I surmount by the sk of a great colonnade, devised so that St. n's Church and churchyard can form part the group, if desired, or the church can be ved to divide the traffic at the bridge approach, in ich case I would perhaps somewhat remodel its er and erect it in Portland stone. It would be still ts parish. In the vacant space opposite St. John's lace a garden, possibly with a tea-house or aurant under the colonnade. At either end of the ion approach I suggest rival railway companies' els, perhaps with a colonnaded covered way linking m together, if they are wise enough to be friendly. e rear approaches to "Wipers" all work well. I e amended the lack of taxi-stand space at terloo. Waterloo Bridge is degraded by the mean rways at its southern end. They are in many ways ectionable. These should be opened out, and ines secured to shorten the approaches to the dge.

he Surrey side is laid out by groups of monumental ldings and well-treated warehouses, with basins or ks approached under the proposed embankment. ect approach to these from the railways is secured a roadway opening out the stations and their nnade as seen from the Temple Gardens, and *vice sa*, of course.

will only add that with a high-level bridge a similar eme of stations is possible, but it does not work out well. It is essential to descend from the bridge to et us call it—"Anzac" Place, and ascend again to stations. A high-level bridge thus repeats the terloo defect of descent at the Surrey approach— of my objections to it. A second is, that Waterloo dge being high level, this ought, in its turn, to be at level, so as to secure a direct embankment roach somewhere between Westminster and ckfriars. A high-level bridge involves an awkward ss-traffic crossing at the Strand end, a point which been overlooked in some of the schemes. But st of all, artistically, it involves a lofty bridge, ch, however commanding in itself, means once more rrupting those very prospects I want to see freed.

s a dweller upon the Surrey side I have often found need of some shelter in making the river crossing foot. In the R.I.B.A. design for Vauxhall Bridge shelters were suggested at the piers, and I suggest same in the design for the new bridge. And why carry the idea a step further and cover the foot ks of the central span, and thus make the bridge resting from within as well as from without? A norial bridge ought to tell something of its mean- to those who pass over as well as those who pass ler or view it from the side. Such a feature, well igned, would give interest to a memorial and monu- ital structure, and scope for architectural expression ticularly called for in a memorial connection. The tle honours of the London regiments, for instance! y not St. George facing Joan of Arc in the centre? on the piers and shore abutments appropriate ups, or perhaps equestrian statues—Lords Roberts Kitchener? And it would not be difficult to find ers.

he central arch is precisely the same width as that London Bridge. At spring tides the total water- is considerably greater than either new Southwark dge or London Bridge. A central arch so treated would break, not block, the prospect of objects beyond the bridge, and such confined breaks are a gain and not a loss to the vista.

WESTMINSTER BRIDGE (OLD) (Labelye, 1741-50).
(NEW) (Thomas Page, 1854-62).

In 1735, Commissioners were appointed by Parliament to erect a bridge at Westminster of any material they thought proper. The design of James King, a carpenter, was accepted, who, poor man! called in Labelye, a Swiss engineer, to erect the stone piers he designed to carry his timber construction. An agitation headed by Maitland, the historian, was got up in favour of a stone bridge, in which Labelye himself gaily joined. It succeeded, and so did he, and it ended in Labelye adapting his stone piers, built for King, to a stone bridge designed by Labelye, for which James King pathetically prepared the timber centering.

The bridge was opened in 1750, having cost £225,000 equivalent to some £700,000 to-day. The gradient, the heights of the parapets, and the obstruction of the waterway, were frequently matters of complaint. In 1840 the bridge was widened, a fortunately abortive scheme having been abandoned for Gothicising it to harmonise with the then new Palace of Westminster.

In 1852 it gave way to the present bridge by Thomas Page, completed in 1862, and costing some £375,000. If careful and elaborate drawings could spell success, this bridge should have no rival. It was Page's third essay. The first two designs, one of three arches, the other of five, endeavoured to emulate in cast-iron Barry's Palace. The present is a weak-looking and unsatisfactory structure. Its construction is curiously composite. Up to low-water level it consists only of wooden piles, which have a cast-iron shield plate to protect them. They can be seen at neap tides. Then granite piers rise to springing level. The granite pilasters above are a mere shield again, while the cast-iron petticoats, in themselves a useless encumbrance which do not carry the true line of the bridge, cloak some well-designed metal arches which had been much better exposed.

LAMBETH BRIDGE (P. W. Barlow, 1862).

Cost £49,000, and is now rapidly disappearing. I would plead for a graceful and simple chain bridge here, without fuss or furbelows. But, considering its surroundings, whatever be done here should be of the best.

VAUXHALL BRIDGE

Is a makeshift, but a clever and creditable one at that. The piers were erected for a concrete bridge, which was abandoned only after the piers were partially built for what we see, because the waterways required by the Act could not be maintained during construction. Thus, owing to Parliament's interference, the permanent structure had to be remodelled to suit purely temporary requirements. Rennie designed a stone bridge of seven arches in 1809 on London Bridge lines, but not so good. It had a considerable gradient, and the "cooking" in Rennie's drawing to work in the raking joints of the spandrels with the horizontal ones of the piers is an interesting study. Although the first stone was laid (in 1811), the scheme was unfortunately abandoned.

Sir S. Bentham then designed a bridge with cast-iron arches, which was carried out with slight alteration by James Walker. I mention these facts because Rennie has been frequently credited with an inferior design with which he had no association. The chief merit, if not the only one in design, possessed by the old bridge was its deft parapet. I put on the screen, in order, the successive stages of the development of new Vauxhall Bridge. First, the original design, a weak rechauffé of Blackfriars, which was abandoned largely in consequence of the R.I.B.A. protest. Successive further trials. Then Mr. Norman Shaw made a design for a camber beam bridge, which was not adopted. Then the concrete faced with granite design followed, a somewhat pretentious affair, the displayed arch stones obviously a mere dressing, too weak for their pretended work. Finally, the steel arched structure upon the piers built for the concrete. It is most unfortunate that this graceful and workmanlike structure cannot be better seen. That we all like the spindles of the parapet I am not sure. They have the merit of freshness, but it would be difficult to better the rest of the steelwork. The sculpture was executed in bronze by two Academicians, by Mr. Pomeroy on the up-river side, by Mr. Drury on the other. We can only heartily congratulate the L.C.C. for initiating the roping in of the arts, and only wish they had consulted the sculptors at the very outset as to the design of the "housings" for their work. But there were penny steamers when that work was done.

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[*] onc'uding portion of a paper on "London Bridges," read before the on Society.

GROSVENOR RAILWAY BRIDGE (Sir J. Fowler and Sir C. Fox, 1860).

A structure quite without interest, excepting perhaps that it is painted different colours on its two sides.

CHELSEA BRIDGE (T. Page, 1858).

Laden with trumpery detail. Several thousands had to be spent upon strengthening it just after it was opened. The last painting before the war cost over £1,400.

ALBERT BRIDGE (R. Ordish, 1873).

The first Atlantic cable was used in this curiously composite structure, the mathematics of which Mr. Copperthwaite tells me defy calculation. In 1884 the cable gave place to steel bars. Stripped of its gewgaws, this structure has undoubted interest, and the sweep of its bridge line is really imposing. But it is unequal to the needs of modern traffic.

OLD BATTERSEA BRIDGE

was erected by fifteen adventurers in 1771, at a cost of £20,000, and it lasted until 1886, having been meanwhile widened in iron and had two of its piers removed to help the waterway.

BATTERSEA BRIDGE (Sir J. Bazalgette, 1890).

The last bridge legacy of the Metropolitan Board of Works, and a failure artistically and practically; artistically, because classical piers after the pattern of London Bridge, nondescript arches, with cast catalogue spandrels, and a Moorish parapet, cannot live in artistic harmony together; a practical failure because of the great coves between the true bridge construction and the petticoats, necessarily deceiving the bargee as to his head room, and suffering occasional knocks in consequence.

PUTNEY BRIDGE (Sir J. Bazalgette, 1883-86).

I include this, although above Battersea, as a fine simple structure itself, on Rennie's lines, because it records for us Rennie's original London Bridge parapet, now lost to us. Of other bridges between Putney and Battersea perhaps the less said the better.

A few words in conclusion. The river traffic on the Thames is a dwindling quantity to all appearance, although I have not fortified this statement by statistics. Yet the Thames Conservancy have laid down some arbitrary rules, wholly ignoring, indeed in practice denying, the claims of London to be an Empire City worthy of noble monuments. The power of the Conservancy has passed to the Port Authority. Can it not be made clear to them that, while they allow Mr. Cooper to house them architecturally in due relation to their importance, we claim for the Thames also some architectural and monumental consideration?

And now the conclusion of the whole matter. B moth must go, and we must have a worthy stone bri in its place. How is that best to be accomplishe a time when Parliament—when we are all—so with the arts of war? How can we best secure preserve our amenities? I have remarked, and w like to insist, that every bridge—each, with m shades between, a monument of nobility or of sham ought to be part of a co-ordinated or ordered sche part, indeed, of that development plan of Lon towards the accomplishment of which the Lon Society has set itself. And development means bridges what it means for steets and places, the lay out for dignity, as well as for convenience of tr But it means more; it includes the dignity of struct design. Obviously co-ordinated development ca exist amid unco-ordinated authority. I want, the see a Bridges Board for London so constituted, by of Parliament if necessary, that it shall do for all bridges and their approaches, including rail bridges, what the Bridge House Trust has hith done for the road bridges of the City. Such a b must be above the trammels hitherto unreason imposed upon the part of the Thames Conservanc

The City Corporation, the L.C.C., the Road B the Port Authority would each have their proper re sentation. Nor would there be lacking represe tives, whose special function would be to watch the dignity of Thames-side, and save us from pos repetitions, reconstructions, or amendments of rail bridges, imposed upon us by individual Acts of Pa ment, and erected regardless of those amenities w a self-respecting City ought, as in the forefront o aspirations, to have the right to command, to con and to protect. Do not let us deceive ourselves, o too complacent over what we possess. There simple and certainly none too lofty a standard fo Is each bridge across the Thames of such a chara as to be classed among those world examples educated and intelligent sightseer desires to go o his way to see? Is each one such as those amon who have a proper civic pride should wish him t out of his way to see, or, indeed, to see at all?

Of Rennie's Waterloo Bridge, fortunately still i (long may it remain so!)—"Yes" a thousand time Rennie's London Bridge "Yes," without doubt, i former simpler dignity.

If Vauxhall Bridge rises to that level I am afrai sightseer can at present be gratified. We hope new Southwark Bridge has a future of dignity be it. But of the rest! Shall we not rather hide diminished heads and think of such renow examples of power, or dignity, or grace as the Aelius or Ponte S. Angelo at Rome; the Pons Milv the Ticino Bridge at Pavia, with its covered arca the Verona Bridge; Ammanati's Ponte della Tr at Florence, 1566; Antonio da Ponte's Rialto, 1 the Alcantara Bridge; the Toledo Bridge at Mad Berlin, the Kurginslin, and Schloss Bridges; A Bridge; Austerlitz Railway Bridge; the Alexander Bridge at Paris; and do not let us forget the Esc Bridge, Buda-Pesth, by an Englishman; the g Auld Brig at Stirling; and Telford's Menai Bridge

I will not weary you with a longer list. I do suggest that a single example should or would be able for London, or even a model to form somet suitable upon, except perhaps the Escuter Bridge such a position as Lambeth. But I select example bridges—definitely and effectively considered— adapted to its own sphere as noble architectural m ments.

When our authorities have grasped the fact each London Bridge erected is worthy of being sidered as a noble architectural monument as we an example of engineering skill, the task of London Society, as regards London bridges, will been accomplished.

GOVERNMENT AID FOR HOUSING.

IT has been for some time known that the Government had decided to afford financial assistance for the building of the large number of houses which l be required after the war.

ntimation of the Government's decision is now mally made by the Local Government Board in a cular addressed to Town Councils, Metropolitan rough Councils, and District Councils, which says t Mr. Hayes Fisher and his predecessors have had ler consideration the question of the provision of ises for the working classes at the close of the war, l that Mr. Hayes Fisher recognises that for some e after the end of the war many of the difficulties ich have brought the building of such houses almost standstill will continue to prevail, and that through- the period of the war there will be an increasing ear of building, so far as this class of house is con- ned, to be subsequently overtaken. The circular tinues:—

The question of the provision of these houses ears to Mr. Fisher to be one of the most pressing ost-war problems for which immediate preparation uld be made. Realising that private enterprise, to ich we owe approximately 95 per cent. of our house- lding prior to the war, will be quite unable to pple successfully and speedily with this arrear, he come to the conclusion that for the years imme- tely following the war it will be necessary to rely more than in the past upon local authorities to vide the houses required, with their road, water, and inage accompaniments.

Having brought the matter before the War Cabinet, Fisher is now authorised to say that the Govern- nt recognises that it will be necessary to afford stantial financial assistance from public funds to se local authorities who are prepared to carry ough, without delay, at the conclusion of the war, rogramme of housing for the working classes which pproved by the Local Government Board.

t is not possible at this stage to indicate either the n which this assistance will take or the extent of ut it may be taken that it will only be available for mited period.

f therefore the local authority are of opinion that re is a housing need in their area and desire to share he financial assistance referred to, they should fill the enclosed form and return it to the Board not r than October 15 next.

At the same time, it is very desirable that those local horities who consider that there is no housing need heir area should nevertheless fill up and return the n by that date.

n thus addressing himself at the outset to the local horities, Mr. Fisher is fully conscious that the com- e solution of the housing problem is not likely to be omplished except with the co-operation of private erprise, including public utility societies, and that in er to secure the full advantage of their help it may advisable for the State to offer them assistance in or other of the directions which are now under the sideration of a Conference sitting at the Local vernment Board.

he form referred to above asks for information on following, among other, subjects:—

Has the war produced any marked increase or rease in the working-class population? Give roximate estimate of the increase or decrease.

Give any opinion as to the probable permanency of h increase or decrease.

tate the number of new houses which, in the opinion he local authority (*a*) are required now; (*b*) should built at the close of the war, to provide the neces- accommodation for persons of the working classes he district.

a) Give brief particulars of any scheme prepared by the local authority, or in course of preparation, for the provision of houses under Part III. of the Housing of the Working Classes Act, 1890, which they are willing to carry out on the conclusion of the war, on the assumption that financial facilities will be afforded by the Government.

(*b*) If no such scheme has been or is being prepared, and need exists for additional houses, are the local authorities willing on the like assumption to prepare such a scheme for submission to the Local Government Board at an early date, and if so for what number of houses?

In connection with any new housing scheme, will extension of facilities for locomotion be necessary or desirable?

In the House of Commons, on July 31, Mr. Hayes Fisher, in reply to Mr. Butcher, st[illegible] that the Government had come to the conclusion that during the period after the war it would be necessary to render financial assistance to local authorities from public funds for the purpose of securing the erection, with as little delay as possible, of a number of houses for the working classes. He had addressed a letter to the local authorities in England and Wales, communicating this decision, and asking them for detailed information as to their housing needs. The question of what could be done to encourage private enterprise in housing was receiving his earnest attention.

According to the "Daily Telegraph" Parliamentary correspondent, Mr. Hayes Fisher, President of the Local Government Board, has appointed a Committee to consider the question of building construction in connection with the provision of dwellings for the working classes in England and Wales, and to report upon the best methods of securing economy and despatch. The Committee is composed of: Sir John Tudor Walters, M.P. (chairman); Sir Charles Allom; Mr. F. Paines, M.V.O.; Mr. James Boyton, M.P.; Mr. William Fairley, M.I.C.E.; Mr. G. Marlow Reed; Mr. J. Walker-Smith, A.M.I.C.E.; Mr. J. Squires; Mr. Raymond Unwin, F.R.I.B.A.; and Sir Aston Webb, K.C.V.O., C.B. Mr. E. Leonard, of the Local Government Board, will be secretary to the Committee.

CORRESPONDENCE.

Property Tax.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—In your issue of July 25 you refer in your editorial to the drawbacks of house-owning, and incidentally fall into the not uncommon error of assuming property tax to be an outgoing. It is no more an outgoing than the bills due to the baker and the butcher. If the owner is fortunate enough not to be assessed for income-tax, the whole of the amount paid as property tax is recoverable.

London, S.E. X.

[We are obliged to our correspondent for calling attention to this point. The question we were discussing, however—"Why do we tax houses?"—does not seem to be gravely affected by the correction. Whether or not the property tax is regarded technically as "an outgoing" does not alter the material fact that it has to be paid, whether by the leaseholder or by the ground-landlord. Nor does it bring a return so visible and palpable as bread and meat. "Bills due to the baker and the butcher" may not be "an outgoing" from the householder, whilst they remain unpaid, but when they are settled, the transaction does not assume to the payer the appearance of an incoming. We must leave these technicalities to the experts. Anyhow, the notoriously excessive taxation of property does not encourage construction or acquisition.—EDS. A. AND B.J.]

WAR·BVILDINGS·SECTION

A WAR-TIME SANATORIUM.

PONT-Y-WAL SANATORIUM, which has been built for King Edward VII. Welsh Memorial Association, is within two miles of Talgarth station and six of Brecon, is designed to meet the requirements of the National Insurance Act of 1911, and is intended for early stages of tuberculosis.

Everything has been done to keep the cost to a minimum without interference with efficiency.

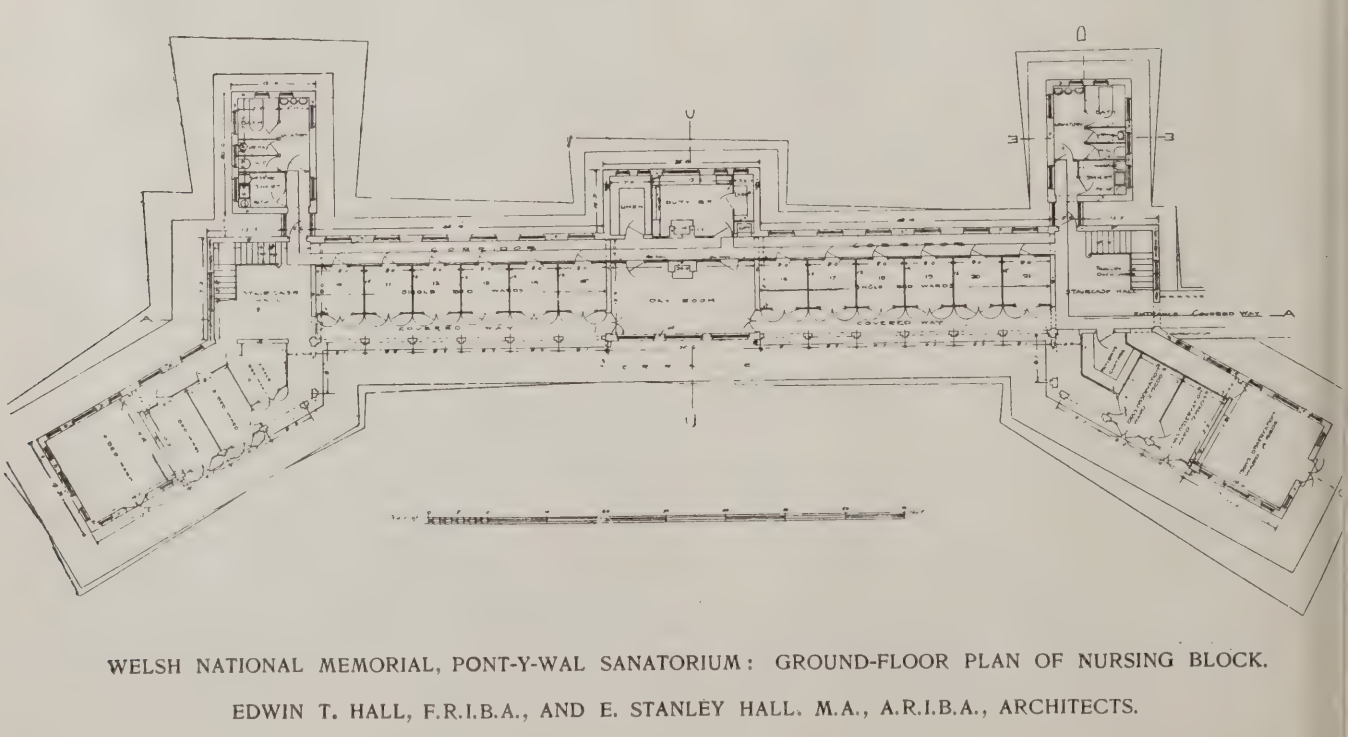
The estate is some 350 acres in extent and from 340 to 700 feet above Ordnance datum.

The site, which is sheltered by beautiful woods, has determined the block plan. The land, crowned by the old mansion, slopes steeply from north to south, and is relatively level across, so that all pavilions are placed parallel and each one looks over that to the south of it, at a magnificent panorama of mountainous country.

The sanatorium provides 304 beds for men, women, and children, and occupies the southern portion of the estate, in view of the public road. In the centre is the administration building, containing the offices of the medical superintendent and matron, the dispensary, examination-room, etc. To the west is the nursing block or hospital of brick-work, rough-cast, two storeys high, for those temporarily requiring hospital treatment.

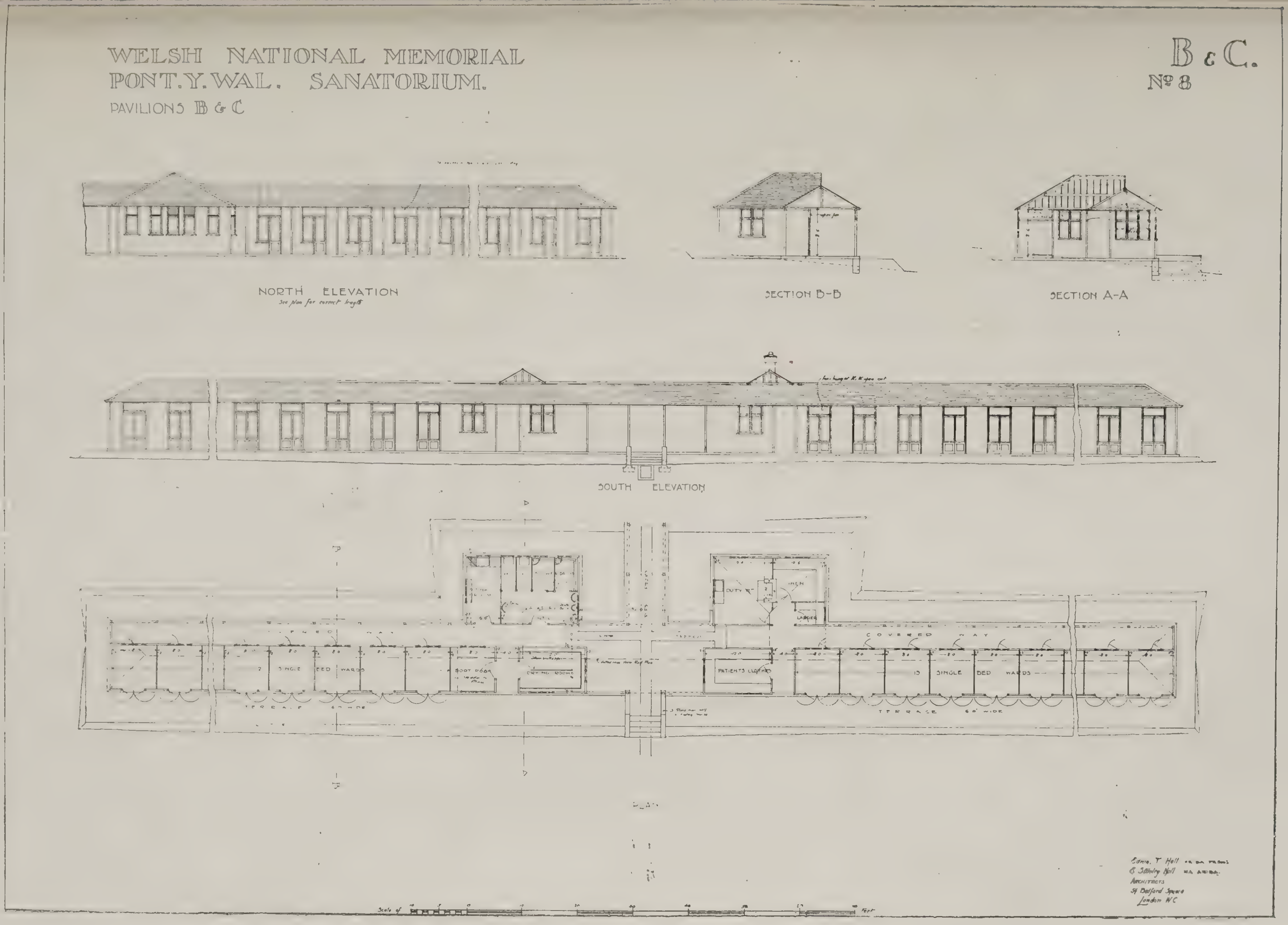
To the east is the dining and recreation block, also of brick-work rough-cast, patients, nurses, and servants, with large kitchen, scullery, etc., and the st the access to the latter being from its road. South of the administration are men's pavilions, north the women's children's. Every adult has a sepa room.

The Nurses' Home is south of patients' buildings, its sitting-rooms fa south, with tennis-courts before them. resident medical staff, as well as matron and female servants, will be lo in the old mansion of the estate on terrace to the north. To the west of sanatorium is the private residence fo medical director of the association ;



WELSH NATIONAL MEMORIAL, PONT-Y-WAL SANATORIUM: GROUND-FLOOR PLAN OF NURSING BLOCK.

EDWIN T. HALL, F.R.I.B.A., AND E. STANLEY HALL, M.A., A.R.I.B.A., ARCHITECTS.



WELSH NATIONAL MEMORIAL, PONT-Y-WAL SANATORIUM: PLANS, ELEVATIONS, AND SECTIONS OF PAVILIONS.

EDWIN T. HALL, F.R.I.B.A., AND E. STANLEY HALL, M.A., A.R.I.B.A., ARCHITECTS.

the power house, workshops, and laundry, with the residential quarters for unmarried men, are at the south-east corner of the sanatorium. The engineer will live in the gate lodge. The sanatorium is lighted by electricity.

All the ordinary pavilions are novel in construction. There are no foundations in the ordinary technical sense. Each block is formed by a raft of reinforced or ferro-concrete laid on a levelled surface, to which the walls and partitions, also of ferro-concrete 3 in. by 2 in. thick respectively, are attached. The ceilings are of iron, the roof is of wood and slate. The floors are finished with red "Decolite."

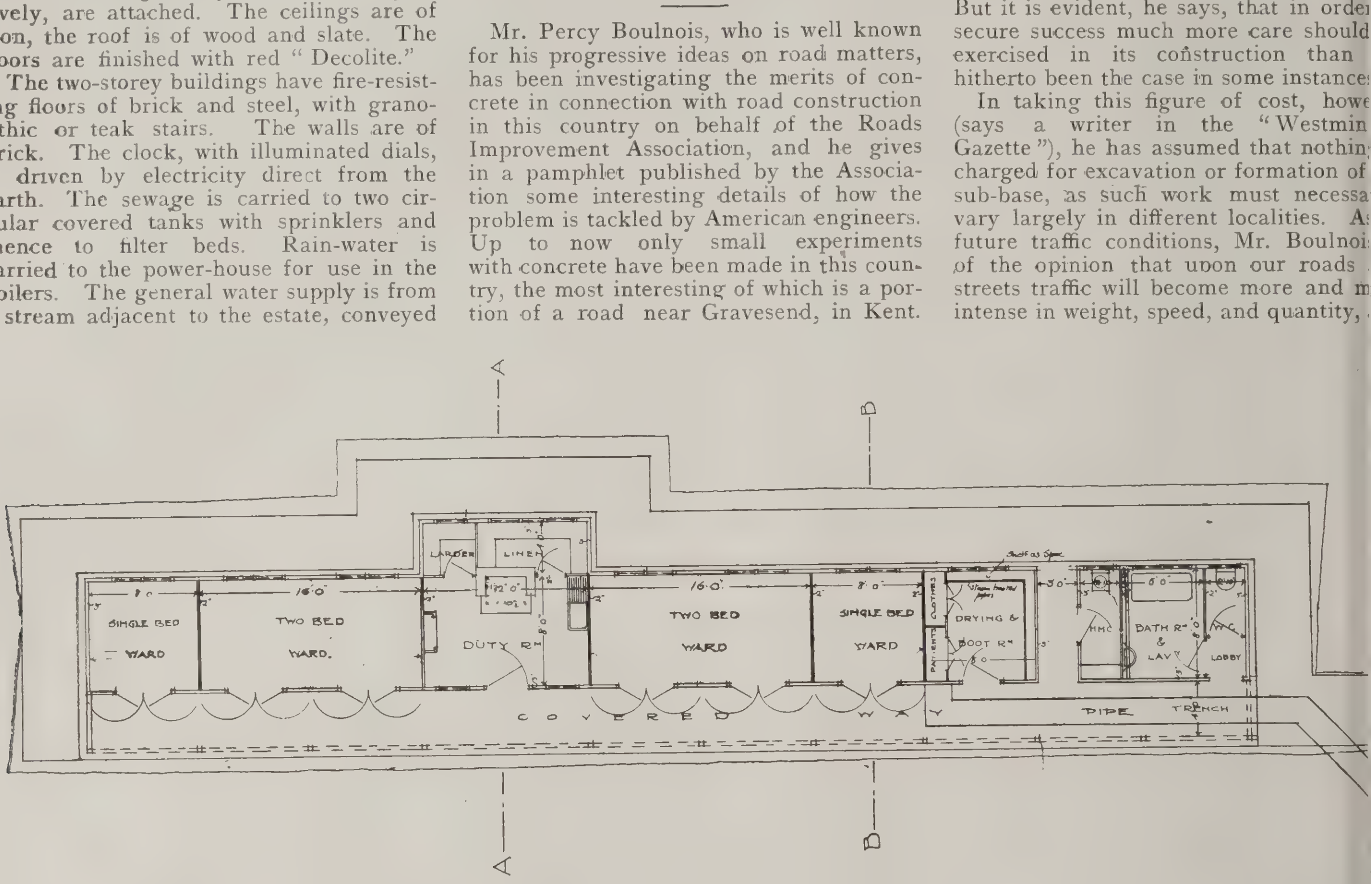
The two-storey buildings have fire-resisting floors of brick and steel, with granolithic or teak stairs. The walls are of brick. The clock, with illuminated dials, is driven by electricity direct from the earth. The sewage is carried to two circular covered tanks with sprinklers and thence to filter beds. Rain-water is carried to the power-house for use in the boilers. The general water supply is from a stream adjacent to the estate, conveyed to a pumping station, and thence to the summit of the estate.

The pre-war amount of the contract is £51,000. The general contractors are Messrs. Harold Arnold and Sons, Ltd., of Doncaster; the architects are Mr. Edwin T. Hall, F.R.I.B.A., F.R.San.Inst., and Mr. E. Stanley Hall, M.A., A.R.I.B.A. of 54, Bedford Square, London.

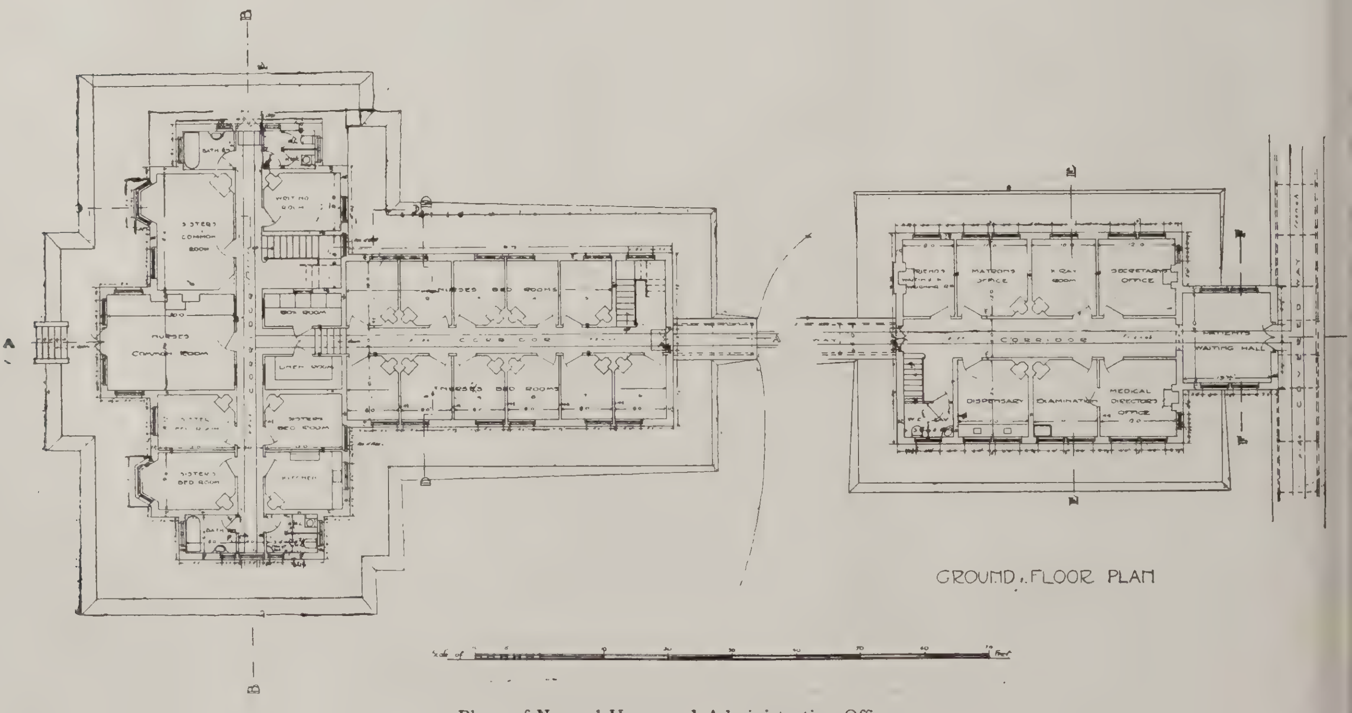
REINFORCED CONCRETE ROADS.

Mr. Percy Boulnois, who is well known for his progressive ideas on road matters, has been investigating the merits of concrete in connection with road construction in this country on behalf of the Roads Improvement Association, and he gives in a pamphlet published by the Association some interesting details of how the problem is tackled by American engineers. Up to now only small experiments with concrete have been made in this country, the most interesting of which is a portion of a road near Gravesend, in Kent. As compared with all our too feeble effo Mr. Boulnois says that at the present t there must be at least 50,000,000 squ yards of concrete roads laid down in United States. In 1914 alone it is e mated that no less than 17,000,000 squ yards were constructed in Amer Speaking of the advantages of concr the author points out that with pro organisation a good concrete road can constructed at a cost of about 5s. per squ yard, and that the cost of maint ance of such a road would be very trifli But it is evident, he says, that in orde secure success much more care should exercised in its construction than hitherto been the case in some instance

In taking this figure of cost, howe (says a writer in the "Westmin Gazette"), he has assumed that nothin charged for excavation or formation of sub-base, as such work must necessa vary largely in different localities. A future traffic conditions, Mr. Boulnoi of the opinion that upon our roads streets traffic will become more and m intense in weight, speed, and quantity,



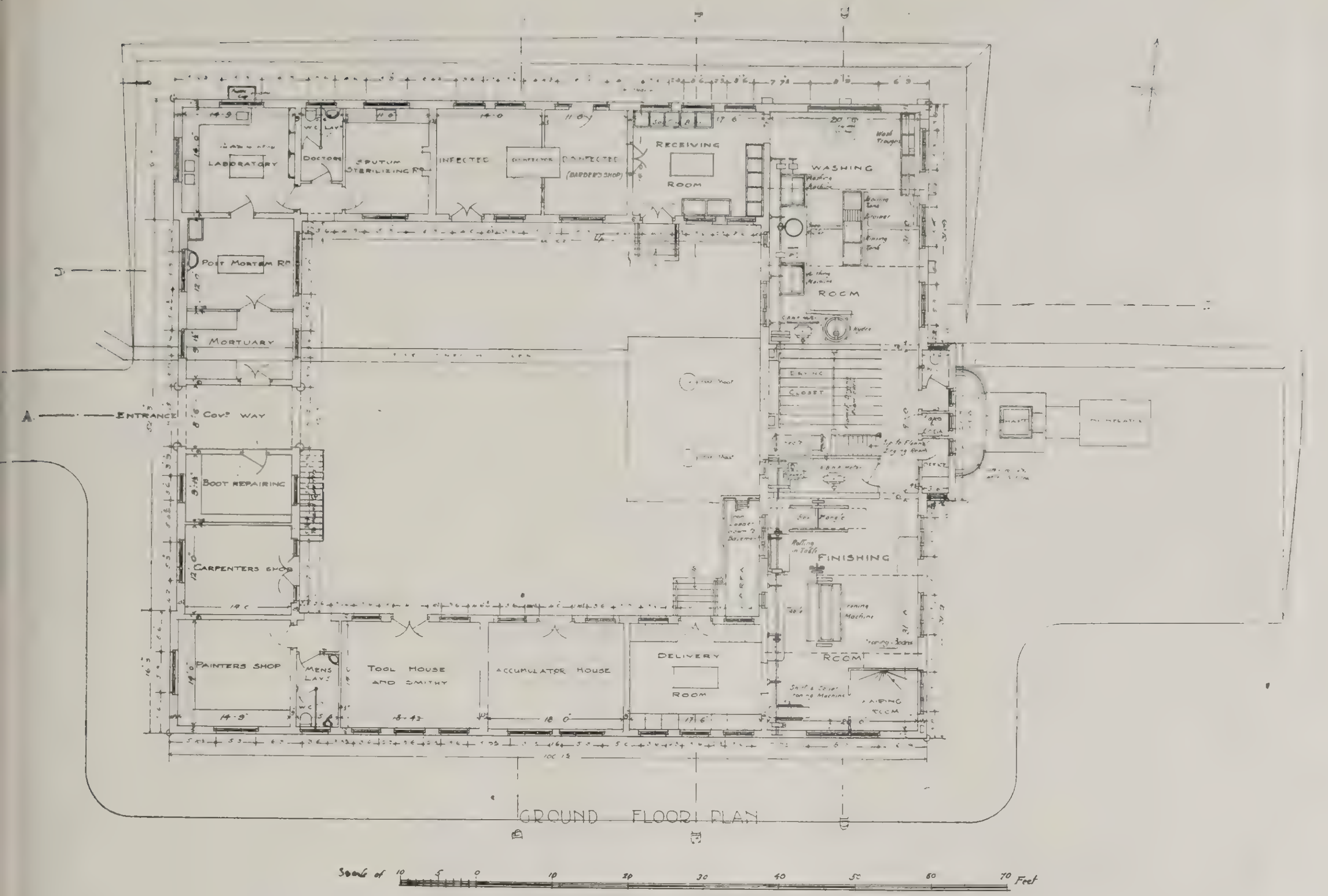
Plan of Children's Isolation Pavilion.



Plans of Nurses' Home and Administration Offices.

WELSH NATIONAL MEMORIAL, PONT-Y-WAL SANATORIUM.

EDWIN T. HALL, F.R.I.B.A., AND E. STANLEY HALL, M.A., A.R.I.B.A., ARCHITECTS.



WELSH NATIONAL MEMORIAL, PONT-Y-WAL SANATORIUM: PLAN OF POWER HOUSE, LAUNDRY, ETC

EDWIN T. HALL, F.R.I.B.A., AND E. STANLEY HALL, M.A., A.R.I.B.A., ARCHITECTS.

t will be the duty of all highway engi- carefully to consider the best manner ich to meet these greater demands rength and durability, and possibly l be found that properly constructed ete roads may in some cases meet quirements.

will be recalled that we have fre- ly published information upon this ct, with particular reference to the rcement of roads with wire mesh or ded metal—a system that has met nuch success.]

NING THE ST. LAWRENCE.

meet the increasing demands for in the Province of Quebec, the nigan Water and Power Com- a concern allied with the Mont- power group, has decided to ment its existing submarine cable ngs by a 100,000-volt transmission cross the St. Lawrence, at a point 1¼ mile above Three Rivers. The ccording to the "Engineering News- d," involves the erection of two supporting a 5,000-ft. span of three ables. This span is the longest of ind known, being greater than the ft. span across the Marquinez Straits lifornia. The towers will rise to ., the same elevation as the top of uebec Bridge, in order to meet the ements of navigation in the river and w the lowest point of the cable to be t 160 ft. above the water.

towers are carried on concrete foun- s, placed about 500 ft. from each and consisting of four circular concrete columns, 11 ft. in diameter, extending to a depth of 40 ft. below the river bed and projecting 25 ft. above it. Above the water level the four piers are tied together by arched concrete structures forming a square, and will be protected against the action of ice by a low crib dam, placed about 100 ft. upstream. Into these four piers will be anchored the four legs of the towers, which will be built of structural steel and will each have a weight of about 400,000 lb. At the top the towers will widen out into a platform carrying the cable supports, which will all be at the same elevation and will be so placed as to keep the three cables 50 ft. apart, in order to prevent them from swinging together. The cables will not be anchored at the supports, but will be brought down to an anchor in the ground at some distance behind the towers. The supports, however, are designed to allow a certain amount of movement to the cables, to provide for the expansion and contraction caused by changes in temperature.

The problems of insulating the cables is a difficult one, since the insulators have not only to carry current at 100,000 volts, but also to withstand a mechanical stress exceeding 150,000 lb. each. Further, their arrangement must be such as to permit any part that may become damaged through electrical failure to be replaced without interfering with the mechanical safety of the span. In these circumstances the insulator group will consist of an elaborate arrangement of porcelain units of a new type subjected to pressure only, and held together by an iron frame.

It is hoped that the line will be completed by the end of the summer.

NEWS ITEMS.

Rebuilding Arras.

Measures are being taken to rebuild the town of Arras now that the German have been driven to a distance of more than five miles from it. Arrangements have been made to secure the immediate return of a number of builders and 250 workmen.

St. Helens Improvement.

The Parliamentary Committee of the St. Helens Corporation have approved of a scheme, in connection with the rebuilding of St. Helens Parish Church, by which Church Street will be widened by 20 ft. and St. Mary Street at the Post Office end is to be considerably widened.

Memorial Buildings for Oundle School.

At a meeting of the old boys of Oundle School held in London it was decided to build a sanctuary and chapel as a thanksgiving for those boys who had given their services in the war, and as a memorial for those who had fallen. The cost of the memorial was estimated at from £15,000 to £20,000.

Philpot Memorial at Winchester Cathedral.

A stained-glass window has just been placed in the south aisle of Winchester Cathedral to the memory of several descendants of Sir John de Philpot, who was Lord Mayor of London in 1378. Among those commemorated are John Philpot, Archdeacon of Winchester, who suffered martyrdom at Smithfield on December 18, 1555, for defending the principles of the Reformation; General Philip Philpot, Colonel-in-Chief of the 11th Hussars, who died at Kensington in 1843; and Major Philip Philpot, 74th Highlanders, who was accidentally drowned while fishing in the River Usk on July 5, 1888, and whose widow is the donor of the window.

Central London Filling Up.

The suspension of building operations since the outbreak of war has nearly put an end to the outward movement of residents from Central London. Prior to 1914 the general tendency was for people to move further and further away from the City, excellent train, tram, and 'bus services facilitating this migration. Now, however, the reverse is the case, and for the past two years there has been a pretty regular return to the Central London districts by persons living in the outer suburbs and the more distant localities which in recent years had become so popular as residential neighbourhoods.

Builders' Benevolent Institution.

On the occasion of the seventieth annual meeting of the Builders' Benevolent Institution held at Pen Corner House, Kingsway, on July 30, the committee expressed gratitude to Major George R. Holland, R.A., for again accepting the presidency. The report stated that only by the exercise of the most scrupulous care had it been possible to continue to pay the pensions already granted. During the past year two men had died and one had had his pension terminated. One woman had been added to the pensioners' list. A legacy of £1,000 (free of duty) had been received from the late Mr. Charles Cox. On the motion of Mr. Frank May, seconded by Mr. H. S. Foster, the report was adopted.

Memorial to the Builder of the "Comet."

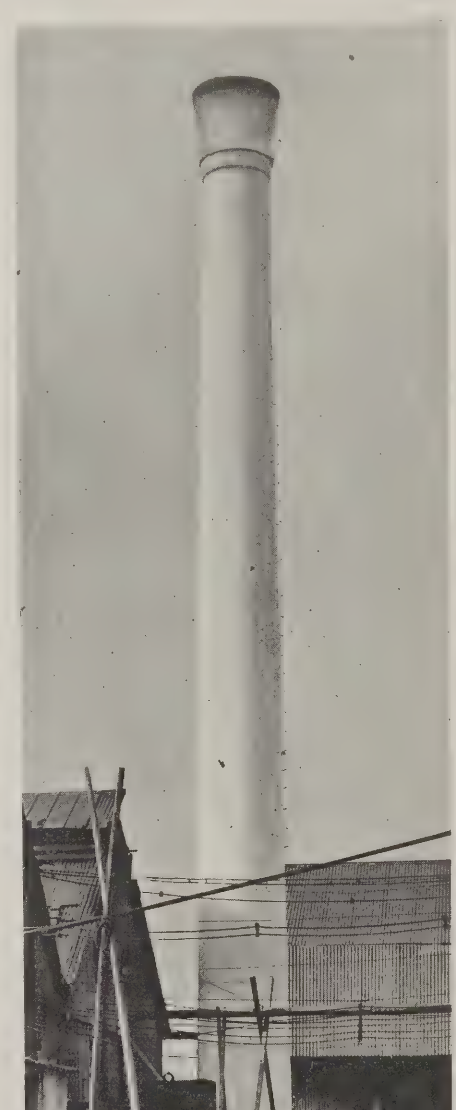
At the anniversary of John Wood, builder of the "Comet," celebrated at Port-Glasgow a few years ago, a memorial tablet was placed on the wall of Messrs. Robert Duncan and Co.'s yard, facing Shore Street, in almost direct line to where the "Comet" had been built a hundred years earlier. The Messrs. Lithgow, of Messrs. Russell and Co., having acquired the old-established works of Messrs. Robert Duncan and Co., are remodelling and enlarging the yard, and the wall where the John Wood Memorial Tablet was placed is now being demolished. On the new wall a new memorial more fitting of the occasion has been placed. The memorial is surmounted by a carving of the "Comet." On each side are two figures carved in stone, emblematic of the shipbuilding industry. The carving work is in Grecian style and is supported by two columns having an ornate capital with moulded bases.

American Construction Materials for Cuba.

Cuba's prosperity has resulted in extensive plans for new sugar mills, new railways, and many other phases of engineering activity, all of which will mean new orders for American construction material and machinery, according to an official survey of the situation recently completed by Mr. W. W. Ewing, of the American Bureau of Foreign and Domestic Commerce, Department of Commerce. A number of new sugar mills are projected, and railway construction and extension are being planned on a large scale. The heavy traffic movement of both sugar and general merchandise will render necessary a great development of the wharf facilities, and the need for greater warehouse space and other port improvements is apparent. Modern hotel buildings are already being planned, and sites acquired in order to meet the demands of the tourist traffic. Many other indications of engineering activity are to be seen in all parts of the island.

Rents of Small Houses.

The Local Government Board have issued the following statement: The Courts (Emergency Powers) Act, 1917, which has recently received the Royal Assent, has made amendments in the Increase of Rent and Mortgage Interest (War Restrictions) Act, 1915, which are of interest to tenants of houses to which the latter Act applies. By virtue of the new Act a tenant can recover from the landlord any amount paid by him in excess of the standard rent fixed by the Act of 1915 and irrecoverable under that Act, at any time within six months from the payment, or
from July 10, 1917, if the excess was
before that date, and he may without p
dice to any other method of recovery
duct it from rent payable during suc
months. Cases have been mentione
which landlords or their agents
entered up as arrears in rent books
which by the Act of 1915 were declar
be irrecoverable. Under the new Act
person who after July 10, 1917, make
entry in a rent book or similar docu
showing or purporting to show any te
as being in arrear in respect of any
which by virtue of the Act of 1915 is
coverable, and any landlord who doe
on the request of the tenant delete
such entry made before that date, is l
on summary conviction to a fine of £



A REINFORCED CONCRETE CHIMNEY.

A. ALBAN H. SCOTT, ARCHITECT.

OBITUARY.

Mr. R. A. Came.

Mr. R. Adolphus Came, who has
at his residence at Woodhall Spa,
seventy-two years of age, and had
much work in Woodhall Spa, where h
signed most of the chief houses i
town, including the Royal Hotel, wi
fine winter gardens. He went to
in the Spa when there were very few h
erected, and it was through his ente
that the Spa owes its beauty of desig
prettily arranged streets, and the
dance of trees which line all the road
streets. He spent a large sum of n
in developing the Spa, and had the
faction of discovering a second mi
water spring. He was, in fact, the
pioneer of Woodhall Spa.

Mr. H. Vaughan.

The death has taken place at Was
ton, U.S.A., in his seventy-third ye
Mr. Henry Vaughan, who designed
churches and several cathedral
America. He was a son of Mr. Th
Barnes Vaughan, of Birkenhead,
served his pupilage as an architect wi
Gilbert Scott, and this led to his as
tion with cathedral work. He went
United States about forty years ago
supplied the designs for churches o
very wide area. Mr. Vaughan fi
New York Cathedral, and his unfi
work is represented in the cathedral
Peter and St. Paul at Washington.
latter building is one of immense
He has been buried in the Beth
Chapel of the cathedral.

A REINFORCED CONCRE CHIMNEY.

Reinforced - concrete constructi
applicable to a greater variety of pu
than any other system of building. I
its versatility seems to be almost w
limit. It is easily adaptable to
familiar requirement of factory co
tion, including the characteristic
chimneys that in certain manufac
industries are indispensable.

The illustration reproduced on thi
shows a chimney that was const
some five or six years ago. It is b
reinforced concrete and was erect
place of an iron chimney which fell
as a result of rusting in certain parts
new chimney has stood exceedingly
and has given no trouble. There
fair number of hair cracks in the
but the internal reinforcement so f
not been affected. The architect w
A. Alban H. Scott.

ENGINEERS' WORKSHOP BUILDINGS.

ring some ten years past (says a r in "The Times" Engineering lement), changes have been apparent .e design and lay-out of engineers' shop buildings. The contrast is most ed in passing from a shop that has recently built and excellently ged into one that is a legacy from an r period. The object-lesson is one of gly accentuated opposites, which on ination reveal much more than merely ficial differences.

e old shops grew in a kind of hap- d fashion as business increased and ional capital became available; and where a works had been planned on ous lines, and when capital was e, several matters which are now re- d as being of first-class importance either ignored or but indifferently with, such as the orderly layout of that are intimately related, and of . departments, with the object of for- ng and facilitating to the utmost the tions and the output of the entire s. Though each separate shop is an endent and self-contained unit, and perations are unlike those of any s, yet all are linked by sequence of iction in interchanges and supplies. oundry and the pattern shop are inti- y related. The smithy and the boiler lating shops have much in common. nachine shops and the turnery include al distinct departments of major and r dimensions, with satellite sections, ooms, storage areas, heavy and light sections devoted to special products, arious services for hoisting and trans- Seldom are two great engineering duplicated. Often, in fact, at nes they may have but few features nmon. Each separate design, there- has to be considered in all its myriad s, and worked out as an individual em. Further, the possible as well as robable requirements of the future to be remembered when planning of the immediate present, and this is pect of the matter which was pretty neglected when the older shops were laid out. With hardly any excep- the earlier works were placed in the st parts of densely crowded cities labour was abundant. The new are now generally built in suburbs, t in the open country where ample s provide for future expansion.

rks differ from one another in magni- The big, self-contained factory is which includes every department sary to the carrying through of a facture from the receipt of the raw ials. When possible the various ngs should be laid out in parallel and all be in intercommunication railway lines of standard or indus- gauge, flanking all the shops at ends es, and connected directly with each. est arrangement is a track of stan- gauge disposed outside, and with ables just without the shop doors to industrial tracks of 18 in. or 24 in. inside the shops. Loading, unload- nd transit are thus provided for, and connection maintained with a rail- iding. With such ample means of ommunication secured, the precise on of the individual shops is of less tance than it would be in the absence extra-mural encircling tracks.

old firms who have outgrown their are so fortunately situated as to be able to abandon an extensive factory, the growth of perhaps a couple of generations, in the heart of a densely populated town, to build anew in the suburbs or miles away out in the country. The chance of effecting a sale of the old buildings is remote, since they are usually constructed solidly of brick or stone, and with glazed sashes they are not easily dismantled. Even if this were not the case, prudential considerations would not justify their re-erection. Again, most of the old buildings have galleries, or upper storeys and floors, which are not held in favour for new shops. Heavy machines are erected on deep foundations, and though the machines can be transported to new quarters, little can be salved from foundations.

Many firms when confronted with straitened surroundings have elected to retain the old works and build a new factory out in the open, surrounding the new shops with cottages for their workpeople, and thus creating an ideal garden city. It is most desirable that suitable means of intercommunication should exist in the shape of a railway siding or a canal. Failing these, if road transit must be employed, then only the lighter groups of work should be produced in the old shops, the heavier being reserved for the new.

NATIONAL FEDERATION'S VISIT TO PORT SUNLIGHT.

At the invitation of Lord Leverhulme, the delegates representing the National Federation of Building Trades Employers at the Liverpool meeting paid a visit to Port Sunlight.

On arriving at New Ferry they were met by Mr. Alex. Paul, Lord Leverhulme's brother-in-law; Mr. J. L. Simpson, the architect; Mr. Byron, manager, building department; Mr. Austin and other officials. The party entered wagonettes and were driven round the village, in the course of which they were shown over the Hulme Art Gallery (Lady Lever Memorial) now in course of construction. The architects, Messrs. William and Segar Owen, of Warrington, were unavoidably absent owing to a Government appointment, but their representative, Mr. H. T. Green, and Mr. A. B. Simpson, clerk of works, showed the delegates over the building, work upon which, it was explained, is stopped owing to the restrictions of the Ministry of Munitions.

The gentlemen who had the arrangements for showing the delegates over this building had gone to a considerable amount of trouble, which was much appreciated, having marked each room as to what it would eventually be, and had all the plans exhibited for the benefit of the delegates. The delegates next visited the offices, which from a point of office organisation and beautiful building proved of great educational value. They next visited the Hulme Hall, and were entertained to afternoon tea. Mr. Hulme Lever welcomed the guests on behalf of his father, Lord Leverhulme (who was unavoidably detained in London), and the other directors, two or three of whom accompanied Mr. Hulme Lever. The latter gentleman stated that some people might think that the village of Port Sunlight had been designed and built up purely as a huge advertisement, but this was not so. The sole idea of Lord Leverhulme and his co-directors in constructing this village was primarily for the well-being of the workpeople, and as an ideal of what can be done to beautify the surroundings of a factory rather than destroy them in building a works.

The President of the North-Western Federation of Building Trades Employers, Mr. Thomas Foster, of Burnley, moved a vote of thanks to Mr. Hulme Lever, which was seconded by Mr. James Storrs, the president of the National Federation.

REINFORCED CONCRETE SHIPS.

A plan for the construction of reinforced concrete ships has been developed by Mr. Alan MacDonald, of MacDonald and Kahn, construction engineers, of San Francisco, who will supervise the construction of an experimental vessel. Work is to start at once in a shipyard laid out for this purpose on San Francisco Bay near Redwood City.

The concrete vessel will be about 300 ft. long, with a cargo capacity of 4,500 tons. The shell of the hull is to be about 6 in. thick, made of concrete, reinforced with steel rods welded together. The weight of the hull is to be less than the weight of a wooden hull for the same cargo capacity. A study of modern wooden shipyard methods revealed the fact that the weight of bolts used in the usual wooden vessel is more than the weight of reinforcement required under the scheme proposed by Mr. MacDonald.

While the need for expediting the production of new tonnage remains urgent, construction is hampered by the difficulty of obtaining deliveries of shipbuilding materials as well as shortage of labour, and for this reason developments in connection with reinforced-concrete ships are of great significance. It is true (says a writer in "The Times" Engineering Supplement) that such vessels do not require less labour resources for the same tonnage than ships built of other materials, but experience has shown that they can be built with much less steel per ton of deadweight carried, and in existing circumstances this point is a very important one. It now appears to be acknowledged that a sound engineering design can be obtained for a reinforced-concrete ship, and although the result is a heavier vessel the increase of weight of a loaded ship is not so great as has been generally believed. Such a vessel would naturally require more power to drive her at a given speed, and in the case of reinforced-concrete barges, in which most of the earlier experience in this class of vessel was obtained, towing would be a more costly process. As a set-off against this handicap of weight, the first cost of the reinforced-concrete vessel should be lower than that of the steel ship, and proof has already been given that upkeep charges are reduced to a minimum.

COMPETITION.

A Motor Garage Lay-out.

It is refreshing to note that the architectural competition is not altogether extinct. We see by an advertisement, which appeared on page xv. of our last issue, that designs are being invited for the lay-out of a commercial motor garage. Those who desire to compete are asked to apply to "Garage," c.o. Box 18, ARCHITECTS' AND BUILDERS' JOURNAL Office, 27-29, Tothill Street, Westminster, S.W.1, giving particulars of works already executed from their designs.

PUBLISHER'S ANNOUNCEMENT.

THE question of the cost of Advertising is governed entirely by the circulation of a publication. The prices for small Advertisements enumerated below are framed upon the lowest possible basis in order to allow the use of the columns of the Journal for "Wants," &c., at a figure well within the reach of everyone.

Advertisers are purchasing the circulation of a paper in buying space for their announcements, and we are able to announce that "The Weekly Nett Sale of The Architects' and Builders' Journal is larger than that of any other Architectural Journal."

Appointments Wanted.

4 lines (about 28 words) 1s. 6d.; 3 insertions, 3s

BUILDER and Contractor's General Foreman seeks re-engagement. Carpenter in trade. Experienced in reinforced concrete construction. Competent and energetic. Town or country.—J. F. L., 94, First Avenue, Bush Hill Park, Enfield.

BUILDER'S Manager or Estimator seeks re-engagement. Quantities, works measured in progress, estimates, contract accounts, etc. Highest references.—H. J., 42, Santos Road, Wandsworth.

BRICKWORK, Pointing, etc., Wanted. Rod or job (piecework). Anywhere.—32, Gordon Road, Southend-on-Sea.

BRICKWORK and Pointing Wanted. Granolithic floors for stables and garages laid by experienced man.—T. A. T., 58, Matlock Road, Leyton, E.

CONTRACTOR'S General Foreman.—Thoroughly experienced in large contracts, munition factories, and quick erection. Could start immediately. Highest testimonials and references. Above military age. —Please address W. H., 2, Birkbeck Road, Wimbledon, S.W. 15

CONTRACTOR'S Timekeeper or Sub-Cashier seeks Re-engagement. Twenty years' experience on public works, docks, railways, water works, Government work. Good references. Reliable. Abstainer.—H. Gilbey, 53, Harwood Road, Fulham, London, S.W. 17

GENERAL Foreman seeks Re-engagement, Energetic and reliable. First-class testimonials. Reinforced concrete.—J. P., 1, Beaconsfield Mansions, Bromells Road, Clapham, S.W.4.

MACHINIST (43) wants constancy. Spindle, tenon, or other. Cutter maker. Saw sharpener. Used to plant, gas, electric. Town or country. Refs.—F. R., 4, Holly Road, Chiswick, W.

THE Association of Builders' Foremen and Clerk of Works, 56, Old Bailey, E.C.—Experienced Foremen and Clerks of Works can be obtained by applying to the Secretary, Mr. J. W. Sawyer, 214, Clapham Road, S.W. Competent foremen and clerks of works are invited to join this Association.

Educational Announcements.

6d. per line.

R.I.B.A. EXAMINATIONS.

Special personal system of preparations by correspondence or private tuition, Bond and Batley (A. G. Bond, B.A., Oxon, A.R.I.B.A.), 96, Grosvenor Road, S.W. Tel. 7036 Victoria.

Appointments Vacant.

6d. per line.

CITY OF CARDIFF.

APPOINTMENT OF CITY ENGINEER AND SURVEYOR.

Applications are invited for this Appointment. Inclusive salary £1,000 per annum. Particulars, conditions, and duties may be obtained on application. Personal canvassinng will disqualify, but each candidate shall send fifty prints of his application accompanied by copies of not more than three recent testimonials.

Applications, stating age and experience, and endorsed "City Engineer," to be delivered on or before SEPTEMBER 10, 1917.

J. L. WHEATLEY,
August 1, 1917. Town Clerk.

Miscellaneous.

6d. per line.

BOOKS.—Books on Building Trades, Engineering, Educational, Literary, Technical, and all other subjects; second-hand at half prices; new books at discount prices; catalogues free; state wants; books sent on approval; books bought; best prices given. W. and C. Foyle, 121-123, Charing Cross Road, London, W.C.

TO ARCHITECTS COMPETING.
SCHEMES AND ESTIMATES FOR ENGINEERING WORK

(Lighting, Heating, Ventilation, and Sanitation), and Architectural Metal Work, supplied free of charge of **STRODE AND CO., LTD.**, 48, Osnaburgh Street, London, N.W., and 18, Easy Row, Birmingham.

SECOND-HAND Optical Mart
For the Purchase and Sale of
LEVELS, THEODOLITES, DRAWING INSTRS.—Clarkson's, 338, High Holborn, London, W.C. (Opposite Gray's Inn Road).

FOR SALE, from a Picture Theatre, a folding Iron Gate, 18 ft. long, 10 ft. high. Price 10 Guineas.—For further particulars apply to Messrs. W. and T. R. Milburn, Architects, Sunderland. 16

ARCHITECTURAL Books for sale, cheap, by Pugin, Stuart, Gwilt, Brown, etc.—List on application to "Exor," 75, Plimsoll Road, N.4. 7

WANTED.—Copies of the "Architectural Review" for January, 1908; also January to May, 1917.—Technical Journals, Ltd., 27-29, Tothill Street, Westminster, S.W.1.

Contracts Open.

9d. per line.

DUBLIN METROPOLITAN POLICE.

TENDERS FOR CLOTHING, HELMETS, EQUIPMENT, etc.

TENDERS are invited to SUPPLY the D Metropolitan Police with TUNICS, GREATCO TROUSERS, CAPES, LEATHER GAIT LEATHER WAISTBELTS, HELMETS, FOR CAPS, etc., and various Articles of Equipmen One Year from January 1, 1918.

Sealed Patterns of the several Articles can be at the Police Store, Lower Castle Yard.

Tenders are to be made on printed forms, can be obtained at the Accountant's Office. Tender must be enclosed in a sealed envelope, ma "Tender for Clothing," etc., and addressed to "Accountant of Metropolitan Police," and to b livered at his office, Lower Castle Yard, on or b SEPTEMBER 14, 1917.

The Accountant reserves the right to reject a all of the Tenders, or to accept such portion o Tender as he may think fit.

Metropolitan Police Office, Dublin Castle,
July 25, 1917.

BOROUGH OF NEW WINDSOR.

TO HOUSEBREAKERS.

The New Windsor Town Council invite TENI for the PULLING DOWN OF A HOUSE, No Church Street, Windsor, the materials to be rem and to become the property of the Contracto copy of the specification may be obtained upon a cation to the Borough Surveyor, 16, Alma Windsor.

Tenders to be sent in to me the undersigned dorsed "Tender for Pulling Down No. 11, Cl Street, Windsor," not later than August 18, 1917

The Committee do not bind themselves to a the highest or any tender.

By order,
E. CECIL DURANT,
Town Clerk, Winds
No. 3, Park Street, Windsor.

For Sale.

SKATING RINK, WARRENPOINT.

Tenders are invited for the purchase of a building, erected about seven years ago.

The building is entirely wood, size about 220 f 84 ft. × 30 ft. high.

The roof, which is 60 ft. span, is boarded felted, with roof light nearly full length of buil There are two rows of metal eave gutter with pipes around building.

It is lighted by electric light from 14 h.p. engine and dynamo.

Tenders to be sent in before August 10, 1917,

ARNOLD WILSON,
Secreta

The Rebuilding of Belgium.

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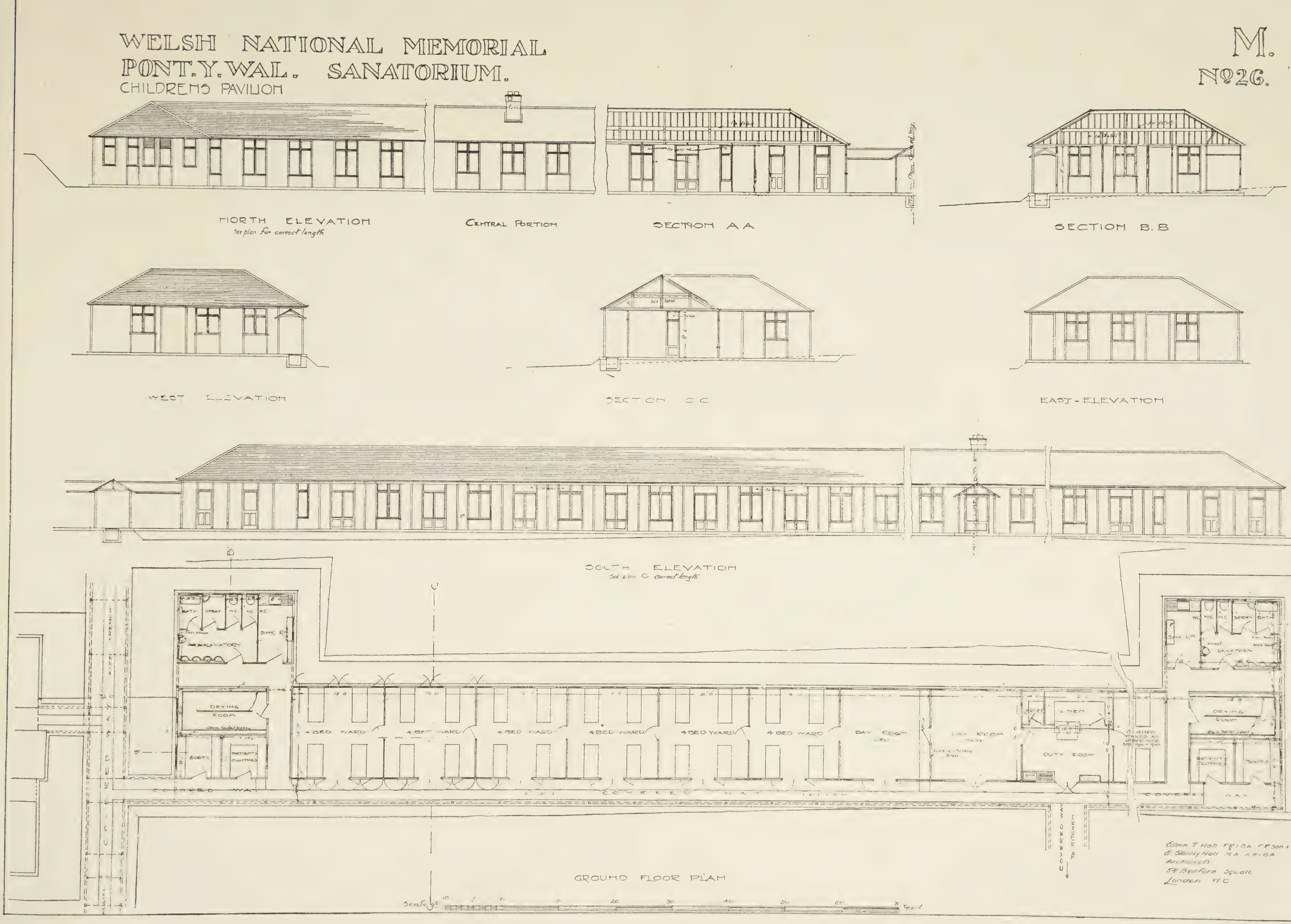

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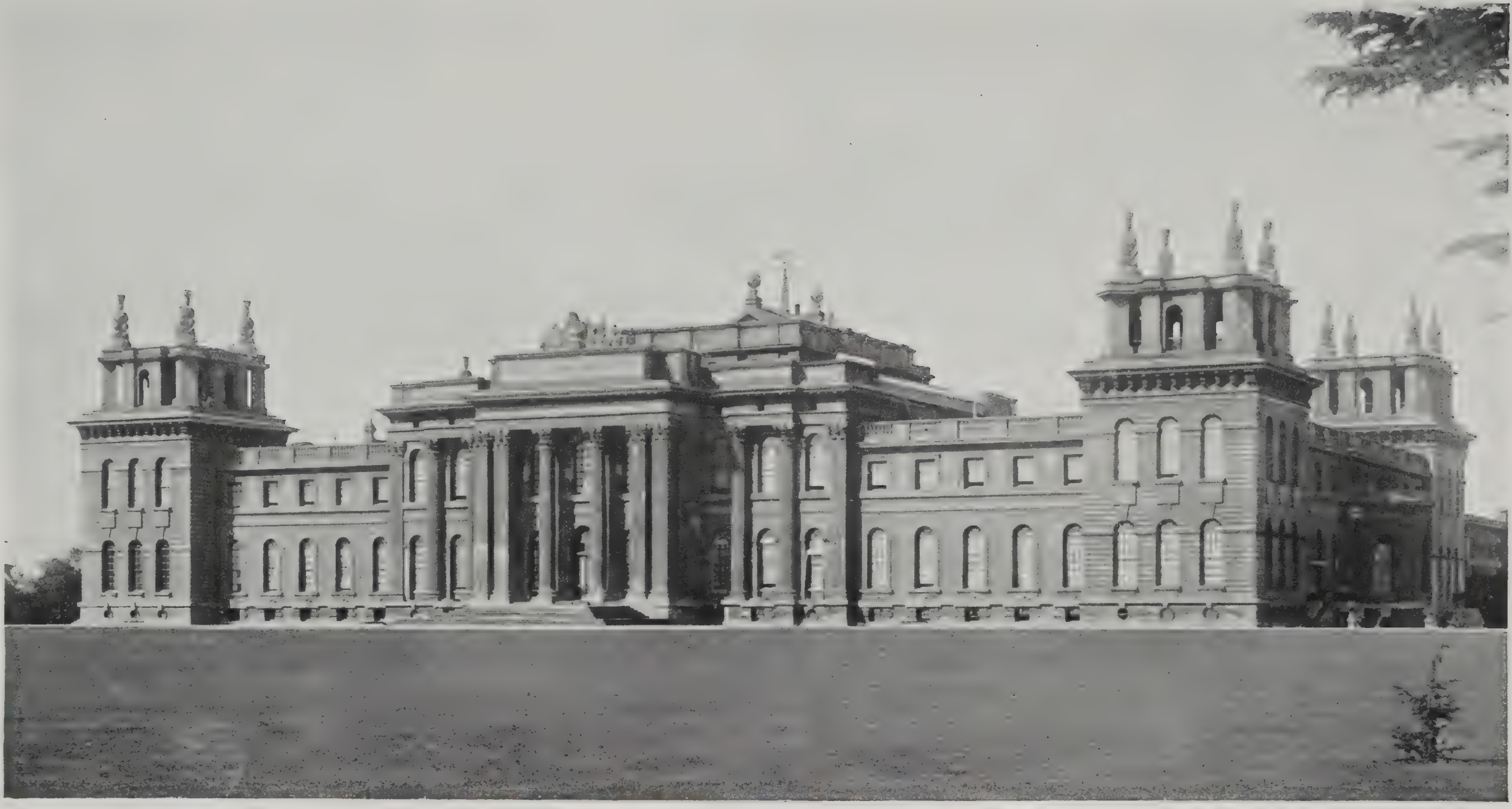
EDWIN T. HALL, F.R.I.B.A., AND E. STANLEY HALL, M.A., A.R.I.B.A., ARCHITECTS.



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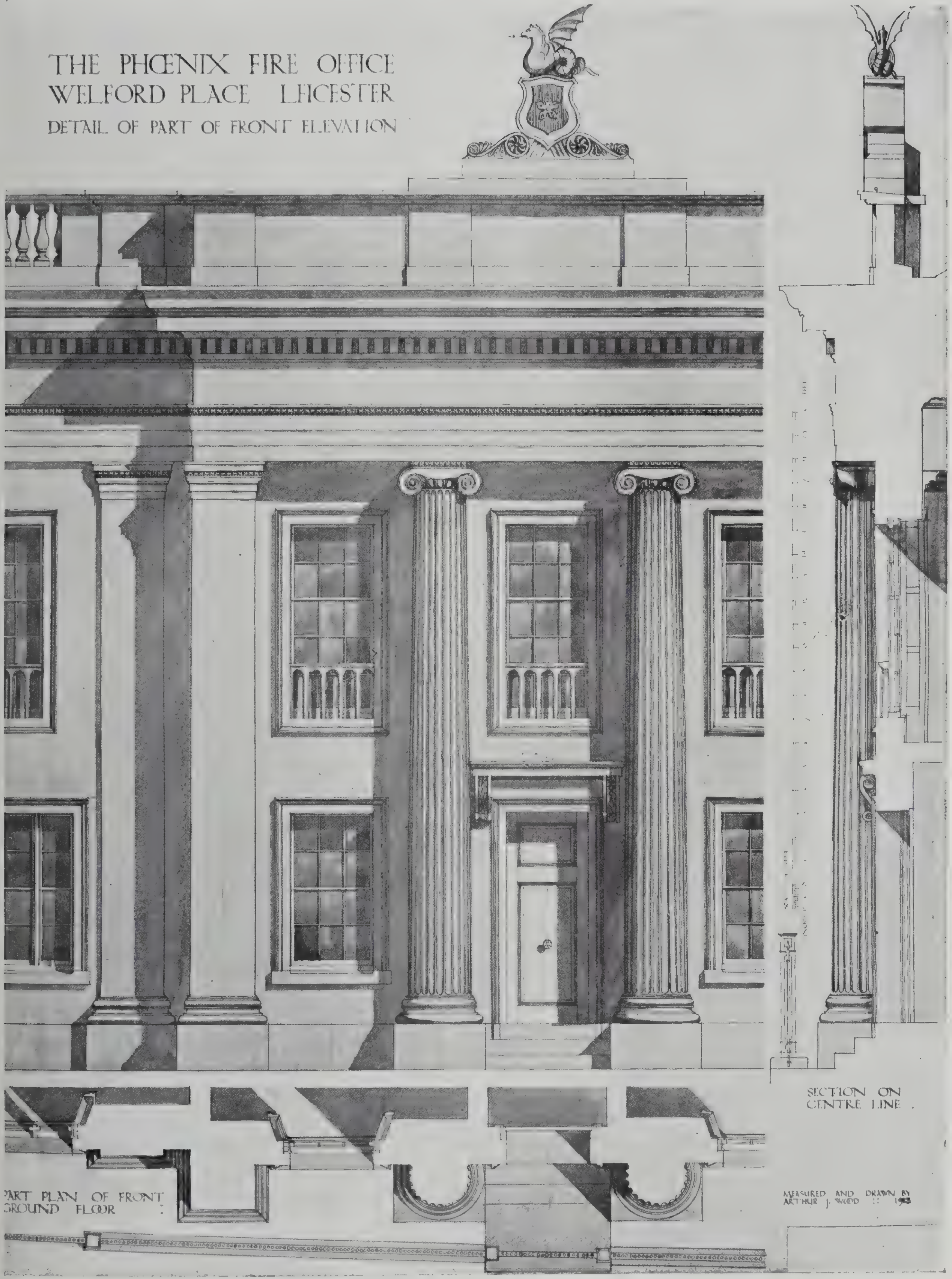
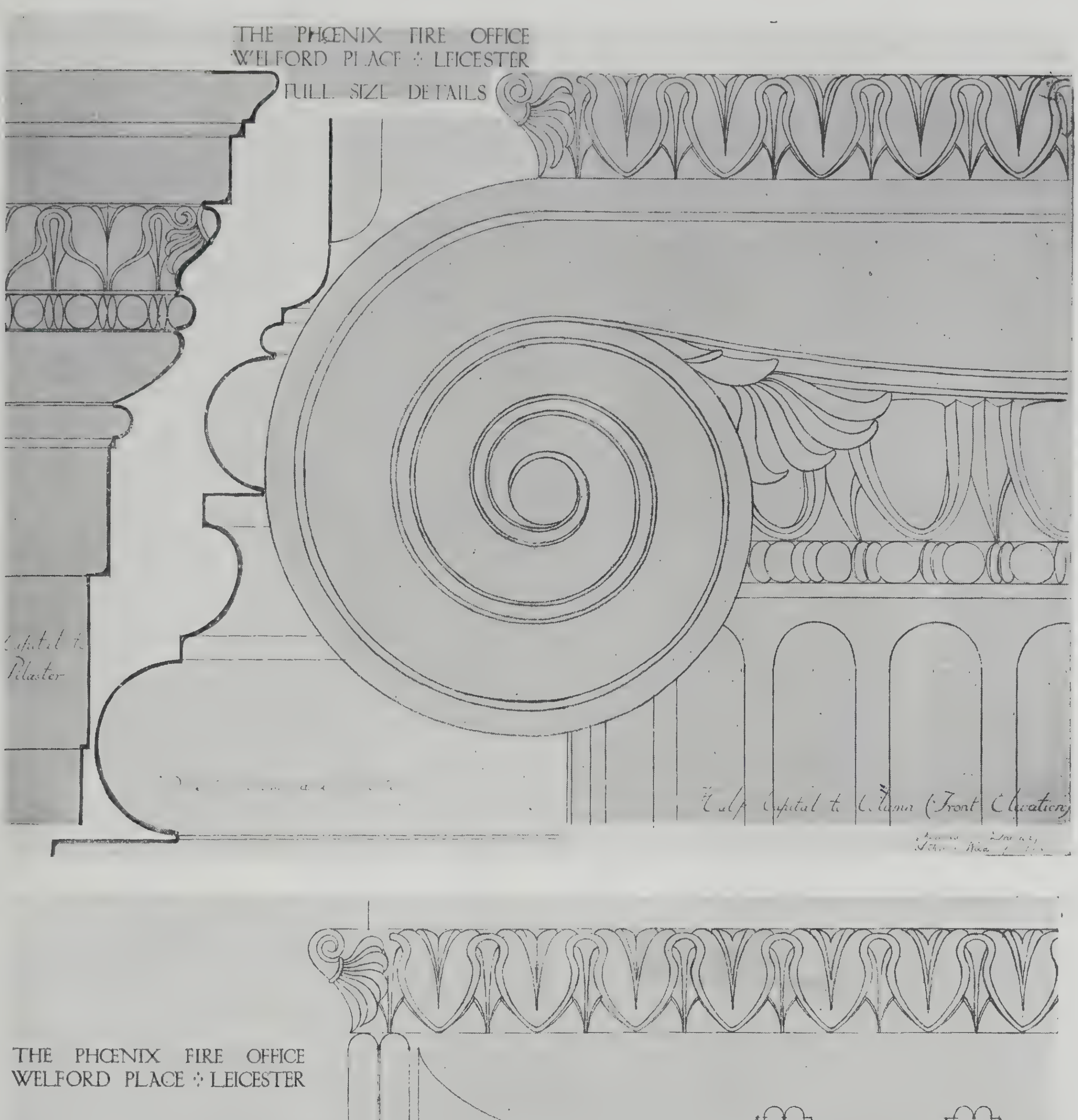


STUDENTS' DRAWINGS (SERIES III.). III.—THE PHŒNIX FIRE OFFICE, WELFORD PLACE, LEICESTER: DETAIL OF FRONT ELEVATION.

MEASURED AND DRAWN BY ARTHUR J. WOOD.



STUDENTS' DRAWINGS (SERIES III.). IV.—THE PHŒNIX FIRE OFFICE, WELFORD PLACE, LEICESTER: DETAILS OF CAPITAL TO COLUMNS.

MEASURED AND DRAWN BY ARTHUR J. WOOD.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

AUGUST 15, 1917. *TOTHILL STREET, WESTMINSTER.* VOLUME 46. No. 1180.

"TWO HUNDRED AND FIFTY MILLION HOUSING SCHEME" was the sensational headline, in large capitals, which, in a ondon evening paper, occupied last Wednesday the ominent position—all across the top of the front ge—usually assigned to the most important war ws. It lacked, alas! the clinching word "Official," and was altogether more exciting than nvincing. One realised at once that it could not ve been anything other than a more or less intelligent forecast, for it was published on the eve of the st meeting of the Departmental Committee on ousing, upon the results of whose inquiry and commendations the ultimate action of the State ll largely depend. In fact, the "scare heading" erely re-echoed the claim put forward by the Joint ommittee on Labour Problems After the War that million houses, costing this stupendous sum, must built. It is plain that the committee has learned think imperially"; and even the Local Government oard, always modest in such estimates, admits a ortage of five hundred thousand houses. Equally oderate is the demand by a housing association for grant of twenty million pounds, a sum that is sed on immediate rather than on prospective needs. hether, as financial purists insist, it is immoral to ke any grant at all is a question that is past bate. Necessity knows no law, and doctrinaire orising is out of date. State aid for housing is a egone conclusion, and the main questions at issue er to the amount and the manner of its allotment.

* * * *

Our evening contemporary provides a useful summary of data. It recalls that in November, 1914, e Government adopted the policy of a free grant om the Exchequer, in addition to loans at cost ce, to enable the local councils to charge the stomary rents and yet avoid loss. "That policy ll holds good, but it has only been put into actice in some ten munition areas, where housing commodation was urgently required." It is contured that much industrial unrest is consequent on insufficient housing of workers, and on the ossly overcrowded state of houses where work is undant. In Dundee, Glasgow, and Rosyth there need, officially admitted, for houses for a ndred thousand workers. In Barrow-in-Furness, is reported, "hundreds of beds are occupied day d night on the Box-and-Cox principle"—a highly nomic adaptation of resources, but not to be commended on hygienic grounds. Other towns by dozen are just as hard put to it to find sleeping ommodation for the toilers; and in the rural dists there is, it is estimated, a shortage of 120,000 tages. Our contemporary traces the decline in use-building to the boom in it which had reached climax by 1906, "when, owing to over-building, ry town in the country was saddled with the den of empty houses, London alone having 000, which, paying no rates, imposed an added den on the houses which were occupied."

* * * *

That the present dearth is a revulsion from a mer plethora is a point but seldom made, but the gnosis seems to be correct; and the recent fall in rates in London districts corroborates it. A fury house-building and "estate development" was naturally succeeded by a withdrawal of capital from a form of investment that had become precarious or simply ruinous, and the money that had been diverted to other fields of speculation has never come back. Any tendency to its return received a severe check from the Finance Act of 1909, when the building of small houses came to an almost complete standstill. Whether the fears raised by this Act were fully justified, or whether, on the contrary, they were in great part groundless, does not matter much: the Act must be judged by its effect, which was to reduce by twenty thousand a year the number of houses built. Then came the final blow—the financial and other effects of the war—the withdrawal of money, men, and materials, and the complete cessation of building. Serious as the shortage now is, it will be greatly accentuated when, the army being disbanded, thousands of men come back to claim the wives who have been either left with their parents or other relatives, or are living in single-life lodgings. For the reasons already stated, and for several other reasons, speculative builders, who had supplied ninety-five per cent. of the working-class dwellings, cannot or will not continue their useful work, and the Government necessarily comes to the rescue. Willy-nilly it has adopted the policy of grants in aid, and the Committee that held its first sitting last Thursday is to show the extent to which this help is required, and how and where the money may be best applied. "It is now certain," our contemporary writes—with what authority we can merely guess—"that in the very near future the Government will have approved schemes for building at least half a million houses within the first year or two of the war's ending, and that to encourage this necessary provision they will give substantial financial assistance, so that the rentals shall not be above those of pre-war times."

* * * *

Pre-war-time rentals, as we have seen, are not the only excuse for State aid; nor is their maintenance wholly desirable. Just at first, while the whole gamut of industrial problems is being retuned to a higher pitch, the old familiar rents may have a sustaining or steadying effect; but an industrial system which puts the rents of the workers beyond their means is unsound at the base. In saying that inadequate housing is a cause of industrial unrest, our contemporary cut deeper than he perhaps intended. What is disturbing the worker is not the mere physical inconvenience of sleeping "Box-and-Cox" fashion, but his acute realisation that the housing problem is a clue to the maze of perplexity into which ill-regulated industrial conditions had cast him. He thereupon demands, not merely decent housing, but the wherewithal to pay for it. Last week we deprecated the hollow absurdity of saying that to subsidise house-building was to benefit "a favoured class" at the expense of the rest of the community. Obviously the worker will profit very little from pre-war rent if he is to receive pre-war wages while paying enhanced prices for everything but his house; and there is some danger that employers may attempt to make pre-war rent an excuse for pre-war wages—for continuing British industry on the mean scale that was rapidly bringing it to ruin. Not timid and pinching economy, but wise and courageous expenditure, is the key to success in industrial enterprise. State aid to building can only be regarded as a necessary evil, and unless it is managed with consummate wisdom it may easily set up a train of ill-consequences. In particular, care must be taken that it does not directly benefit the employer who seeks to get out of it an advantage that was never intended for him. Indirect advantages, such as the improved health, vigour, and contentment of the workers, are legitimately his, and will be an ample recompense for his contributions in the form of the extra taxation that is certainly entailed. And—what is more clearly within our province—low rents are certain to imply indifferent building, if only because the common knowledge that they are low must produce insidiously a bad moral effect.

* * * *

Photography is coming to its own. Discovered recently, and quite by accident, in a state of vagabondage, it was compassionately given temporary shelter (in a spare room) by the Royal Academy. Now, very promptly (for a national institution) the National Portrait Gallery is offering the nomad a permanent and very respectable home. A uniform series of permanent photographs of naval, military, and civilian Britons prominent in war service is being collected, and may possibly be allotted a special gallery. This is an interesting thing to do, and should be done properly. That is to say, the photographs should be framed and hung on the walls, not buried in drawers or in albums, where very few people would take the trouble to look for them. If they are shown on the walls, however, the exposure to light will cause them to fade away more swiftly than the reputation of the originals, unless the process chosen has honestly established its claim to be "permanent.'' Many other institutions—notably the London County Council and the national museums—are forming excellent collections of topographical photographs; and the National Portrait Gallery had already got together a large collection of contemporary photographs—hence it may be inferred that this latest announcement about them must imply that suitable subjects are to be exhibited on the walls.

* * * *

There is something incongruous, it must be admitted, in putting a theatre next a mission church. It is not surprising, therefore, that the London County Council has refused to grant a licence for a proposed theatre that was to be erected next door to a Roman Catholic church at a corner of Golden Square, W. Not that the collocation would have been without precedent, especially on the Continent, where public opinion is more liberal, or less squeamish, or, at all events, different. There is, it was stated in the evidence before the L.C.C. committee, a theatre in Cranbourn Street abutting on a church and schools, with nobody one penny the worse for the conjunction. We well remember, too, that some years ago a subject of much unseemly jesting was the existence of a church between two public-houses, somewhere in Pimlico. To this unholy alliance it was customary to apply, *fortissimo*, the couplet, "Wherever man erects a house of prayer, Satan is sure to build a chapel there." Other jokes about it, "in prose and worse," were too ribald for repetition, and in any case they would not apply — and of course the couplet we have ventured to quote does not apply to a temple of Thespis, howsoever hard they may chance to hit a temple of Bacchus, and howsoever customary it may be to intertwine the myrtle and the vine. Time was when the Church had a monopoly of the drama, when the drama was in its infancy, lisping, or prattling, in moralities and mysteries; but since it has grown up and has perhaps lost some of its early innocence, the Church will have none of it. Church and playhouse

are, for reasons that are beyond our scope of inqu
and in any case would probably baffle analysis, " sca
cater-cousins." Hence one may easily sympathise
the protagonists on both sides. It is a case for
exercise of the fine and happy impartiality of
songster in the "Mikado"—"And he was right s
object. . . . And you are right and I am ri
and everything is quite correct." We trust that
architect of the proposed new theatre is able to see
decision in that light, and that he will eventually
ere long put up his building on an undisputed site.

* * * *

We are glad to notice that Mr. Arthur T. Bol
F.S.A., F.R.I.B.A., has been appointed Curator of
John Soane's Museum, Lincoln's Inn Fields, in suc
sion to the late Mr. Walter L. Spiers. In every
it is an appropriate appointment. Mr. Bolton,
was the 1893 Soane Medallist, and two years l
gained the Institute Medal for Essays, has not only
right scholarly bent, but also the right genial temp
ment for such a post. He is *persona grata* am
architects. A vice-president of the Architect
Association, he was the first master of the A.A.
School, and has been a member of the Art and Lit
ture Committees of the Institute. He is the autho
several excellent architectural essays, which invaria
exhibit the rather rare combination of sound criti
and patient research. These qualities are exempli
in his contribution to the "Architectural Review"
June last on "Lincoln's Inn and the Fields."
Bolton was educated at Eagle House, Wimbled
Haileybury; University College, London; and at
A.A. Schools. Articled to the late R. W. Edis, F.
he commenced practice in 1890 at Westminster,
besides much good domestic work, has designed
Sanitas offices and factories at Limehouse; Ing
House, Stockwell; and the Allan Line offices in C
spur Street. On the death of the late Mr. H
Stock, F.R.I.B.A., Mr. Bolton completed the Hamb
Amerika Line offices, which are also in Cock
Street. He is thoroughly at home at the Soane, w
as he is only forty-three years old—which is
juvenile as curators go—a long tenure of office
much good work may be confidently expected for
from him.

* * * *

A vital factor in industrial organisation
admirably restated by Mr. A. J. Dorman the o
day, when he took the chair at the twenty-sev
ordinary general meeting, at Middlesbrough,
Messrs. Dorman, Long and Co., Ltd. It appears
this firm is entering upon developments which
give employment to five or six thousand men,
whom some three thousand houses will be b
Naturally, therefore, the firm is intensely intere
in labour problems. "What,'' Mr. Dorman as
"is the problem to be solved? To my mind,'
said, "it is this—at what price will the work
give their best labour free from all restrictions
must be evident to all thinking men that no
wages can be paid except for efficiency and incre
output. Given that, a settlement will be an
matter, for the employer does not ask for incre
hours and hard work—improved machinery wil
the hard work. What he asks, and is prepare
pay for, is the willing work of the workmen. U
such conditions it is possible to pay higher w
and yet produce at a lower cost.'' That puts
case very concisely, and it touches upon an aspe
the relations between capital and labour that
been hitherto strangely neglected. It brings u
the threshold of the psychology of the worker,
gets very near to the root of labour unrest. I
worker is "unwilling,'' there is a reason for it,
to find out the reason and remove it will be to
lutionise industry. The Builders' Parliament sh
do much helpful work in this respect.

HERE AND THERE.

I last week's issue of the Journal a brief note on the rebuilding of the Congregational Church next to Sir Isaac Newton's house in Leicester Square t me to browse a little on the topographical tion of my bookshelves. What exactly I was king for I hardly knew; but when John Hollings-d's monograph on Leicester Square caught my : I knew that subconscious memory had impelled to that and that alone, although years had psed since I had consciously seen it; for it bears title on its back, and no mark of distinction from dozen other paper-covered and unlettered nphlets among which it stood. Yet I pounced on instantly as the one I wanted. How little we ow about the mental processes which we think we trol, but which seem sometimes to control us!

* * * *

ohn Hollingshead—"Honest John," as he was led—who for so many years "kept the sacred np of burlesque burning" at the Gaiety Theatre the Strand, had been previously manager of the hambra, and had therefore a natural interest in icester Square. If the text of the booklet consists inly of gossip about theatrical celebrities, what uld you? Probably I should have thrown away pamphlet immediately after perusal, but for the istrations that John induced Mons. Alias to get ether for him. These are as heterogenous, and some instances as trumpery, as the items in an Gaiety burlesque or a modern revue. But that ie are, in my opinion, distinctly worth preserving attested by the fact that the pamphlet is now ore me, and by my declared resolve that when it served the present occasion it shall go back to its lf rather than be consigned to a robustly acious waste-paper basket. There are a "Mapp of Parish of St. Ann's" of 1755; some early graved trade cards; the staircase at Sir Joshua ynolds's house, 37, Leicester Square; Rowland-'s caricature of grossly fat and impossibly thin tomers at the fashionable bonnet shop in Cran-rne Alley; an eighteenth-century view showing cester Square as an actual square, or rather as octagon, for its four corners are splayed, an iron ce with a brick plinth enclosing four patches of ensward; a view of Leicester Place of about o; an exterior view of the rotunda known as /ylde's Globe,"; an interior view of the same build- to show the remarkable staircase and galleries; and lozen or so of more or less interesting portraits l cariacatures, comparatively ancient and relatively dern.

* * * *

Among the portraits the most arresting is that of zabeth, titular Queen of Bohemia (and only ighter of James the First) who was toasted by gallants as the "Queen of Hearts." She had rteen children (an unlucky number), and she died Leicester House, which was on the north side of cester Field, to which it gave the name. Leices- House, which was pulled down in 1788, was a brick building, comprising two storeys and an ic, and having nine windows in its front. It had n built some time between 1632 and 1636 by bert Sidney, second Earl of Leicester, and father the Algernon Sidney who in 1683 was condemned Judge Jeffreys for alleged complicity in the Rye use Plot and beheaded in Lincoln's Inn Fields. ype, in 1720, describes Leicester House as "a ge building with a fair court before it for the eption of coaches, and a fine garden behind it"— ormal Dutch garden, it is said.

By 1730 houses had sprung up all about the square; and in the midst thereof was the equestrian statue, richly gilt, of George the First, modelled by C. Buchard for the Duke of Chandos, and brought from Canons in 1747. In after years it fell into decay, and became the butt of "Punch" and the laughing-stock of London. Its royal rider was unhorsed and dismembered, and the horse—an indifferent copy of Le Sœur's horse at Charing Cross—suffered every indignity that mischievous boys and ingenious practical jokers could devise. In 1866 some mad wags whitewashed its long-suffering body, dotted it all over with black spots, gave it "outsize" donkey's ears, and set on its back the mutilated statue, which they furnished with a foolish improvised head crowned with a fool's cap, and armed with a long-handled besom. This idiotic outrage had the effect of bringing to a head the public indignation at the disgraceful state of the square, which had become a mere refuse heap, the receptacle of battered pots and pans, broken crockery, and dead cats and dogs. For some time the fate of the square as an open space was in the balance. There was a good deal of expensive litigation on this point, until, in 1873, the Master of the Rolls decided "that the vacant space in Leicester Square is not to be built over, but will be retained as open ground for the purposes of ornament and recreation." And it was so.

* * * *

Next year Mr. Albert Grant, M.P., sometimes called Baron Grant, a notorious "plunger" in finance, bought the square and made a present of it to the public through the Metropolitan Board of Works. He did more. He commissioned Mr. James Knowles, the architect who afterwards became a power in the land as proprietor and editor of the "Nineteenth Century" review, to lay out the square. Signor Fontana made the Shakespeare statue—a replica of Kent's and Shumacher's statue on the cenotaph in Westminster Abbey—which surmounts the marble fountain in the middle of the square; and Grant got Mr. H. Weekes, R.A., to make the bust of Sir Joshua Reynolds, Mr. J. Durham, A.R.A., to model that of Hogarth, Mr. W. C. Marshall, R.A., that of Sir Isaac Newton, and Mr. T. Woolner, A.R.A., that of John Hunter. At first it was intended that a statue of Hunter should occupy the central position, and that a bust of Dr. Johnson should occupy the place which was ultimately assigned to Hunter. Johnson's association with the square was merely casual—he often visited Reynolds, who, as a tablet on the house records, lived at No. 37 (west side) from 1761 until his death. His studio became Messrs. Puttick and Simpson's auction room. Hogarth had his studio at No. 30, Hunter lived at No. 28, and Sir Isaac Newton at No. 35, St. Martin's Street, on the south side of the square. Grant's gift cost him £30,000, and he wrote, "If I had taken as much trouble and given as much time to make £30,000 as I did in spending that amount on Leicester Square I should probably have succeeded." The ceremonial handing over of the property to the public took place on July 9, 1874. This is necessarily a very incomplete sketch of the glories and vicissitudes of the most Bohemian and consequently the most interesting of all the London squares. But there are three omissions that, unless I repair them, would bring upon me the just wrath of all true lovers of banality. I "make good," therefore, by adding that (1) Leicester House was "the pouting place of princes"; (2) Leicester Field was the scene of innumerable duels; and (3) Leicester Square is "Paris in London." DIOGENES.

ART AND ARCHITECTURAL TRAINING IN INDIA.

AN interesting feature of a recent "Times of India" Trade Supplement is a comprehensive survey of the work that is being done and that lies before schools of art in their relation to the industries, and, of course, with a particular application to the needs of India.

The Indian Art Schools.

In British India there are five schools of art controlled and supported by Government, one each in the following cities: Bombay, Calcutta, Lahore, Lucknow, and Madras. Those at Bombay, Calcutta, and Madras have been established for many years, that at Lahore is of somewhat more recent date, while that at Lucknow was founded only a few years ago. The size, scope, and equipment of the schools vary. That at Bombay covers a somewhat wide field, and includes a Fine Art section, comprising separate schools for drawing and painting, modelling, design, and architecture, art workshops, and a scientific research laboratory and studios for pottery. Those at Lahore, Lucknow, and Madras have directed their main efforts to the improvement of the artistic crafts of the Provinces they serve, through the medium of the Art Workshops attached to the schools; while the school at Calcutta has devoted its attention mainly to the study of the graphic arts, and their revival upon traditional lines.

From their first inception the Schools of Art have been regarded by Government more in the light of costly fads, thrust upon them by theorists in India and England, than as centres of practical utility to the country—a view that is now only in course of revision. This standpoint has certainly not been modified by the writings of a certain number of archæologists, domiciled in England, who have insisted that the only object the schools should set before them is the perpetuation of old Indian patterns. These writers assume that if the Indian craftsmen will only use the designs handed down to them by their forefathers they will thereby find salvations from the economic ruin that threatens them from European competition. They further assume that it is possible for a School of Art to lead a decaying industry back into the path of prosperity. Anyone who has studied on the spot the causes which have resulted in the depression of the Indian craftsmen and is aware of the many difficulties surrounding the problem of rescuing them and at the same time has any knowledge of the true functions of a school of art in relation to industry, knows what a small basis of fact there is to support the first of these assumptions, and that the ideas represented by the second have been responsible for much of the ineffective work of the schools in the past. When her artistic crafts were prosperous and flourishing India was isolated. The articles produced by the craftsmen reflected the needs and tastes of the people of that period in construction and design. Since India ceased to be isolated, the needs and tastes of large sections of the people have gradually changed; alien styles of architecture have been introduced, involving the use of alien designs in their details; domestic articles, both useful and ornamental, and materials for costumes and furniture of foreign design have been imported, and are now used by Indians. During this period, while these changes of taste were at work, the methods of the Indian craftsmen have remained unaltered; but in Europe a complete revolution has taken place in industrial work. Steam has displaced hand power, factories have taken the place of isolated workshops, world-wide business organisation the place of local trading, and as a consequence of this extension of markets nationalism and tradition in design has been replaced by eclecticism.

The change of taste among those classes in India which in the past supported the indigenous craftsmen,
the conservatism of the craftsmen in clinging to th
old methods and workshop organisation in the face
changed conditions, and the competition of the hig
organised industries of Europe are the real causes
the financial collapse of the Indian craftsmen; wh
the debasement of his artistic work is due to
uninstructed attempts to meet the needs of his Ind
customers, who no longer want articles of traditio
pattern, but demand goods of alien origin and desi
So far therefore is the assumption from being corre
that the downfall of the Indian craftsmen is due
their departure from the methods of their forefathe
that the reverse is rather the truth; their pres
depressed state having been brought about by th
refusal to adapt their methods and ideas to mod
conditions.

Artistic Industries, Architecture, and the Build Trade.

These professions and industries include designi
modelling, and carving for stone work, wood wo
terra cotta, and plaster work: ornamental wrought a
cast iron work, ornamental brass, copper and bro
work, cabinet making, inlaying and fine joinery,
work, decorative painting. They are of great impo
ance, and the manner in which they can be assis
presents a difficult problem to solve owing to the la
of opportunities of obtaining practical experie
under working and business conditions open to des
and technical students at Schools of Art.

In England this opportunity is afforded by
studios and workshops of the large and wealthy fi
by whom applied art work is chiefly carried on. Th
studios and workshops are superintended by design
possessing, in many instances, talent of a very h
order, assisted by thoroughly trained and experien
craftsmen. A student engaged as an assistant
apprentice in one of these studios or workshops gai
knowledge of design and work it would be impossi
for him to acquire in a School of Art only, though h
able, by the study of advanced drawing and desig
the classes of the school, to supplement his studio a
workshop practice. Thus studio, workshop, and sch
work together, each supplying what the other lac
they combine to keep up the numbers of experien
designers and trained craftsmen capable of taking
places of the elder men as they retire, or of provid
reliable superintendence for new enterprises as th
are started.

As there is an almost unlimited supply of trai
designers in England, capitalists investing money
businesses engaged in applied art work can, by pay
for it, command the services of the best talent in
country. In India, on the contrary, there are scarc
any trained designers at all, and by their abse
capitalists are prevented from engaging in busin
in this direction, while the art students in India
deprived of those opportunities of gaining pract
experience enjoyed by students in England. It
quite true that an Indian firm might engage the serv
of an expert European designer to superintend th
drawing office, but it is very doubtful if suffici
inducement to leave England could be held out to
best in the profession. Remuneration would have
any case, to be offered on a scale that would render
commercial success of any such undertaking extrem
problematical. To import second-class men, or th
who are failures in England, would be worse th
useless; it has already been tried with disastr
results both to the men themselves and the capital
who have engaged them.

Practical Experience Needed.

As with designers so with craftsmen: the absence
practical workshop training in high-class decorat
work under the best men in their profession such

obtained by apprentices and young craftsmen
t Britain severely handicaps the Indian crafts-
actising any of the industries I have specified.
he craft teachers in the schools of art in India
als in knowledge of design and technique of
ttached to the Schools of Art in Great Britain,
students at the completion of their courses of
ould not be competent to superintend important
o English student would be considered so for a
t, but recruited as most of the Indian craft
s are from the bazaars and deprived of business
nce as the students are, it is not a matter of
that schools of art in India have failed to
designers and craftsmen capable of meeting
uirements of architects anxious to introduce the
rkmanship into their buildings. How can this
nity of gaining practical experience be
d for art students in India? Two ways suggest
lves. The first is for Government to select the
dents trained in the technical workshops and
classes at the schools of art, grant them scholar-
d place them as articled pupils for two or three
with the few really good firms undertaking
ive work in India, at the same time arranging
continued attendance of the students at the
ed classes for drawing, modelling, and design of
ols of art for two or three hours daily. By this
the practical experience of the workshop and
office might be combined with higher artistic
, but I confess to having no great faith in the
ful working of this plan for any length of time.

A Government Design Studio.

alternative method of solving the problem is
mbitious, but is more certain. In suggesting its
n, I do so the more readily because it will meet
cational difficulties of the students, and at the
me result in the production of much better
and technical work for Government buildings
s be the means of permanently raising the stan-
the applied arts connected with the building
roughout the country. At the present time,
h many thousands of pounds are spent annually
ernment upon buildings of monumental scale
racter, the decorative adjuncts of these build-
l very far short of the standard of those seen in
. Many of these buildings have been shorn of
ive details contrary to the inclination of their
ts, because they found it impossible to get them
out in a satisfactory manner in India. They
d of entrusting such work to contractors, who
knowledge or understanding of style, are not
aftsmen, much less master craftsmen them-
but are merely tradesmen who have no more
or pride in the artistic quality of their work
y have in the artistic education of the men they
. The case is otherwise in Great Britain and
tinent, where the heads of such firms are often
high artistic attainments. The young artisans
igners employed in these firms are encouraged
y way by their employers to attend the local
d art classes, who in many instances pay their
a further inducement to do so, while it is not
on to find that liberal scholarships and endow-
re provided by firms to enable the best of their
és to continue their studies in the higher
s of artistic work. No hope of assistance can
d for by the present generation of building con-
in this direction, and it remains, therefore, for
ment to take the task in hand. This can be
Government starting an institution consisting
sign studio, with art workshops attached, in
he architect's designs for decorative work in
ment buildings can be carried out under the
sion of a first-class designer, assisted by a staff
rts to direct the technical work of each depart-
The beneficial effect of such an establishment
e felt in many directions. Architects would be able to rely upon their detail drawings being enlarged and carried out with sympathy for and understanding of the styles in which the buildings are designed, and would be assured that the workmanship of the actual details would be of the best quality. As many promising students from the design and technical classes of the schools of art as are competent for admission could be received as articled pupils or assistants in the drawing office, studio, or workshops, there to obtain a practical and business training in their profession or craft.

THE PLATES.

The Great Gate of Blenheim Palace.

THE criticism that Blenheim Palace is unduly heavy and ponderous in style may be made with perfect justice in regard to the general structure; but certain features of the composition deserve to be excluded from it. The Great Gate, for example (illustrated in this issue), though undoubtedly a strong and massive piece of design, possesses marked qualities of grace and elegance. The proportions are so skilfully maintained that the great scale of the gate is unrealised until the attention is called to it by the two diminutive figures standing close to the pier on the right-hand side. The gateway has some fine cast-iron gates, the arch itself being filled with a grille fan-shape in design and containing a representation of military trophies. On each side the springing of the arch is marked by a broad band of stone with some carved festoons below and niches containing figures above. Immediately above these are sunk panels with carved wreaths. The broad oblong panel that fills the space between the keystone of the arch and the entablature above contains an inscription which reads as follows: "Under the auspices of a munificent sovereign this house was built for John Duke of Marlborough, and his Duchess Sarah, by Sir J. Vanbrugh between the years 1705 and 1722. And this Royal manor of Woodstock, together with a grant of £240,000, towards the building of Blenheim, was given by Her Majesty Queen Anne and confirmed by Act of Parliament [3 and 4, Anne C. 4.] to the said John Duke of Marlborough and to all his issue male and female lineally descending." The admirable plan of the Palace, which is also included in this issue, is reproduced from Vol. II. of the Liverpool Architectural Sketch Book.

Administration Building, Youngstown Sheet and Tube Company, Youngstown, Ohio.

American architects are constantly demonstrating the architectural possibilities of simple materials simply handled. An interesting example is the Administration Building at Youngstown, Ohio, illustrated in this issue. The structure is mainly of brick, with terra-cotta dressings. The architects, Messrs. Graham, Burnham and Co., have maintained a simple pilaster motif throughout all their elevations, and have invested the building with quite a monumental dignity. A weak point in the composition is the treatment of the entrance doorway, which appears to be supporting the pilaster above, by which, indeed, it seems in imminent danger of being crushed. Our reproductions are made by courtesy of the "American Architect."

Dining Halls, etc., Pont-Y-Wal Sanatorium.

This drawing, showing in detail the planning and arrangements of the dining halls, kitchen, stores, etc., at the Pont-Y-Wal National Memorial Sanatorium, should be studied in conjunction with the article and other drawings which appeared in our last issue. The architects were Messrs. Edwin T. Hall, F.R.I.B.A., and E. Stanley Hall, M.A., A.R.I.B.A.

HOUSING AFTER THE WAR.

Forthcoming Conference.

A conference on Housing After the War is to be held in London to receive the report of a committee which was appointed at a meeting of representatives of various bodies interested in real estate, held in Manchester in December last. In the course of their report the committee state: "Until recent times house property held the premier place as an investment in the estimation of many people who sought to derive a permanently remunerative income from their savings or other reserve capital. The gradual decline in the building of such property had reached a climax shortly before the outbreak of war, and forms the most striking evidence possible of the great change in the views of the average investor. Whatever the causes may be, the ordinary investor for some years has been less disposed to regard the investment of his savings in house property as a desirable policy, and the property market, so far as his dealings are concerned, has become dead or of little account. It is generally admitted that in the past the nation has depended for the housing of the people upon the energy, skill, and resource of private house builders, whose training qualified them to carry out successfully the building of acceptable dwellings in an economical manner. Mortgages on real property being by law a trustees' security, constitutes an admission by the State of the soundness of such investments; and this recognition has encouraged the efforts of private enterprise in the provision of housing accommodation for the people. By the fact that such investments were in the same category as Government stock, thousands of millions of money were attracted to the real property market, and the investing public rightly concluded that house property was a safe and highly respectable investment. Under these conditions it was natural that professions, trades, and businesses should evolve in connection with the provision of dwelling-houses and that the housing of the people should become a staple industry. Unfortunately through lack of co-ordination between those who framed and passed building laws, those who have administered them, and those called upon to observe them, this great industry has become the victim of political contention. Idealistic and impracticable legislation has been put upon the Statute Book out of touch and keeping with the practical necessities of the complex housing question. Agitation has stirred up strife between landlord and tenant, and public opinion has been prejudiced against the ownership of cottage property as a form of investment. It is obvious that if money does not flow in the channels of property purchasing the production of houses by private enterprise must cease, and the country will continue to be confronted with a very grave situation; the house building and allied trades will cease to exist, and the house shortage will be incurable by voluntary effort. The conference regards such a possible development with much anxiety, and is satisfied that if the industry be treated with reasonable consideration, in spite of the present discouragement and depression, it may be rapidly revived. The feeling of the conference is strongly in favour of the continuance and encouragement of private enterprise as distinguished from State or municipal schemes for the supply of houses, and is unanimously of opinion that in this way the needs and wishes of the people will be better and more effectually met."

Housing and Town Planning.

Councillor H. Shawcross, J.P., chairman of the National Housing and Town Planning Council, writes in the "Daily News": A definite step towards the preparation of a comprehensive after-the-war housing and town-planning policy has been taken by the issue from the Local Government Board of a circular letter and questionnaire in which the President of the Board expresses the view that much of the work of meeting the housing shortage (a shortage estimated by Mr. Hayes Fisher himself to be not less than 500,000) must at the close of the war be taken in hand by local authorities, and conveys the intimation that the War Cabinet have decided to afford "substantial financial assistance" from public funds to those local authorities who are prepared to carry through without delay at the conclusion of the war a programme of housing for the working classes which is approved by the Local Government Board.

The Government are thus committed to the preparation of a great national housing policy to be carried into effect at the close of the war, and the National Housing and Town Planning Council are therefore proposing to hold a series of conferences throughout the country for the purpose of stimulating action by local authorities and pressing home upon the Government the need for new housing and town-planning legislation upon various points.

At these conferences certain questions will be asked, and it will be of interest to anticipate the most important of these, and, in the answers, to state in general terms the policy of the Council.

The Number of New Houses.

What number of new houses are required? If the housing question is to be dealt with in a complete and comprehensive manner, then during the next ten years the following houses should be built.

At least 163,000 houses must be built yearly for the next ten years in order that by then there shall be ample accommodation for all; all slums cleared away; all insanitary houses replaced or made fit.

When must the work of building be commenced? Immediately at the close of the war, in order to find employment for our discharged soldiers. The Government must insist that local authorities have sites secured and plans prepared so that contracts can be given out when peace is declared.

Who is to build houses in the period immediately following the close of the war? Local authorities and societies of public utility, because private enterprise will not build at the close of the war, when interest rates are abnormal, and money difficult to obtain.

Will local authorities be willing to build? Yes, on condition that such financial assistance is given as will enable them to let houses at rents that will cause no loss to the rates.

Wages and Rent.

How can adequate rents be paid by the poorest? Before the close of the war wages boards must be established for all industries in which the wages paid are inadequate. Each board must be required to consider, in fixing minimum wages, the rent of a suitable house as well as the food and clothing necessary to maintain a labourer and a normal family in a state of physical efficiency with some degree of comfort.

THE PROPOSED CHANN TUNNEL.

In connection with the project for
ing a method of subterranean
between Dover and Calais, it is wo
membering that the feasibility of t
posal was amply demonstrated
pioneer heading, about 7 ft. in dia
which was driven over thirty yea
in the chalk near Dover on the on
and at Sangatte, near Calais,
other, a total distance altogether
miles and a half. A speed o
120 yards in six working days was
tained, the strata being the same
material on both sides. This wo
carried out, under the supervis
Colonel Beaumont, by means
tunnelling machine patented by
English, R.E. This machine is o
by compressed air, and autom
transfers the excavated matte
wagons.

The experimental galleries refe
were excavated in a most satis
manner, as is shown by the fo
extract from a certificate addre
Colonel Beaumont, dated Febru
1884, by Monsieur L. Breton, of Sa
Pas-de-Calais, who was engineer
projected submarine railway
France and England:

"The experimental gallery
chalk $2^{m.}$ $13^{c.m.}$ (7 ft. 2 in.) in di
has been excavated by your mac
distance from $156^{m.}$ $10^{c.m.}$ (169 ya
$1839^{m.}$ $63^{c.m.}$ (1,998 yards.). 810^{m}
($877\frac{1}{2}$ yards) advance has been obta
fifty-three days of actual work
$24^{m.}$ $80^{c.m.}$ (27 yards) have been di
a single day. Much better progres
have been made if the means at
posal had been more complete for
moval of the dirt. When you hav
pleted certain trifling modificat
your machine, I think you will ob
realisation of your hope and get
of thirty yards per twenty-four hou
advance the gallery 1 metre (1 yd.
the compressors took in 1,510 cube
of free air, which corresponds to
sumption of 1 kilo ($2\frac{1}{4}$ lb.) of
every five kilos ($11\frac{1}{4}$ lb.) of rock c
by your machine. The cost of com
air has been 12 fr. 25 c. (10s.) f
metre of advance made during the
months' work. The coal cost,
at the boilers, 21 fr. 80 c. (17s.
ton."

Improvements in the machine w
sequently effected by Colonel Be
with the result that a total len
nearly 3,000 yards of heading was
by it in the red sandstone in co
with the Mersey Tunnel between
pool and Birkenhead.

The rate of boring shrinks to i
cance when compared with the sp
machine which is said to have b
vented by an American engineer,
reported to have offered his me
marvel to the British Governmen
cording to a newspaper paragraph
ventor has undertaken to have the
Tunnel bored and traffic running
month of the commencement of
tions! Here, then, is the solutio
submarine problem. For we shoul
content with a tunnel between
and France only. We should w
between England and America.
mans must not be allowed to get
the invention or within a few mo
must expect to have them explodin
under London.

WAR·BVILDINGS·SECTION

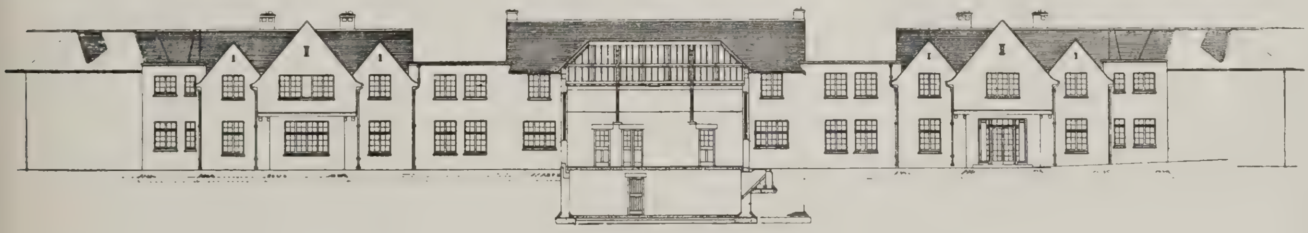
LENHAM SANATORIUM, KENT.

THIS sanatorium, erected for the County Council of Kent, is about e mile and a quarter from Lenham ation, in a conspicuous position on the gh land to the north of the Pilgrim ay, once crowded with pilgrims to the rine of St. Thomas à Becket, at Canter- ry.

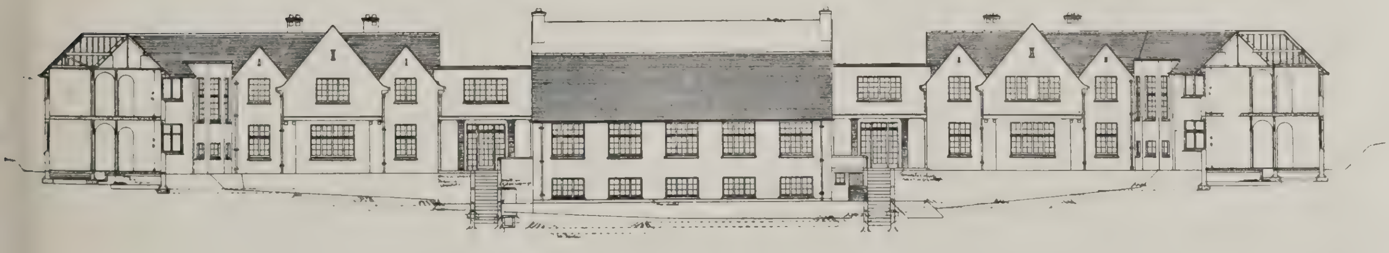
The site is saucer-shaped at a steep gle from north to south. The build- gs are near the summit but protected by and by the trees to east and west. The ews extend for some thirty miles. Following the contour of the ground the main building, of brick walls rough-cast outside, is two storeys high, with a reinforced-concrete first floor. The central block faces due south, the wings being slightly indrawn, so that every patient's room faces southwards and all are approached by corridors on the northern side. This building contains one hundred patients' beds in wards having one to six beds each, besides the offices, doctors' and matrons' quarters, nurses' and servants' home.

The dining-hall is in the centre, and beneath are the boiler and engine-houses. To the north of it are the kitchen, larders, and stores, the staff dining-rooms being close by. The patients will do their own washing-up of plates, etc., in the rooms provided, each one having his special fitting for his plates, knives, etc.

South of the main building is another block for twenty-five patients, the roof of this being below the terrace of the main building, so that the view is uninterrupted. This building is of special con-



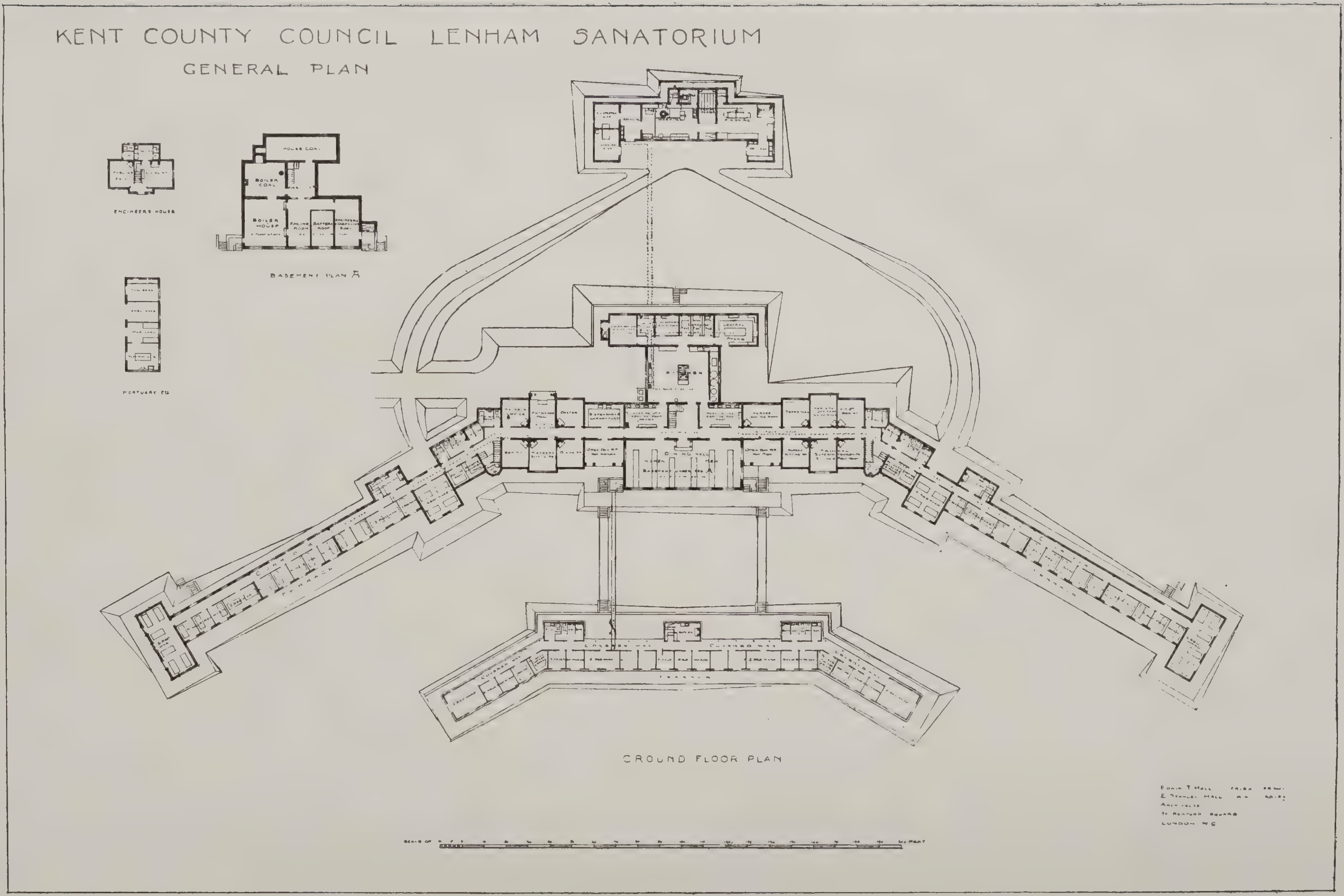
NORTH ELEVATION



SOUTH ELEVATION

LENHAM SANATORIUM, KENT: ELEVATIONS OF ADMINISTRATIVE BLOCK.

EDWIN T. HALL, F.R.I.B.A., AND E. STANLEY HALL, M.A., A.R.I.B.A., ARCHITECTS.



LENHAM SANATORIUM, KENT: GENERAL PLAN. EDWIN T. HALL, F.R.I.B.A., AND E. STANLEY HALL. M.A., A.R.I.B.A., ARCHITECTS.

n, consisting of a reinforced-e raft on the ground with external nd internal partition, 3 in. and 2 in. made of reinforced concrete d to the raft. The ceilings are of d plaster, the roofs being of wood. undry is on the top of the hill to th, and is of brickwork rough cast. he buildings are covered with ted hard red tiles with wide eaves. are numerous wooden huts in addi-Water is laid on from the public

sewage is carried to slate biological y the Slate Bed Biological Sewage al Co., with filter beds, the purified being carried into the chalk sub-

buildings are lighted by elec-generated on the premises, and are y heated by hot water from a calorifier. Ample fire-escapes are d.

contract for the sanatorium, gs, roads and paths was £21,000. eneral contractors were Messrs. Bros., of Rochester. The architects lessrs. Edwin T. Hall, F.R.I.B.A., n.Inst., and E. Stanley Hall, M.A., 3.A., of London, W.C.

NEWS ITEMS.

onus in Coventry Building Trade.

greement has been come to between ventry and District Builders' Asso-and the Coventry United Building Federation, by which a war bonus lfpenny per hour is to be paid the once, and a further halfpenny from ber 1. The agreement was arrived a conference presided over by an of the Chief Industrial Commis-

A Million Houses Demanded.

Joint Committee on Labour ns After the War (which embraces ole trade unionist movement of the) is pressing for an immediate deci-to the Government-housing policy. illion houses—5,000,000 additional -the committee state in a mani-ught to be completed within four rom the declaration of peace, and vernment must promptly inform uthorities that they have got to be nd that each place will have its d quota. The cost is placed at 0,000, of which probably 0,000 would be no more than a sound financial investment, covering not only repairs, management, and interest, but also a sinking fund to repay the whole debt within sixty years.

Architect Wounded.

Second-Lieutenant H. N. Wills, of the King's (Liverpool Regiment), youngest son of the late Lieutenant-Colonel T. M. Wills, F.R.C.S.I., V.D., and Mrs. Wills, was severely wounded on July 31, and is in hospital in Manchester. Mr. Wills, an old Denstonian, is an architect, and enlisted in the 6th King's Liverpool in August, 1914, going to France with the battalion in February, 1915. Last year he received his commission, and he returned to the front in March.

British Portland Cement Manufacturers.

The profits of the British Portland Cement Manufacturers for the year ended April 30 were £254,162, against £256,796. Debenture stock redemption account absorbs £14,974; general depreciation reserve account, £40,000; and barge and rolling stock depreciation account £2,100; leaving a net profit of £125,945, against £146,375. The directors recommend a dividend on the Ordinary shares at the rate of 4 per cent. per annum for the year, the same as for 1915-16, leaving to be carried forward £72,994, against £73,154.

200,000 *Cottages Wanted.*

Speaking on "Town Planning at the Close of the War" at the Hampstead Garden Suburb last week Mr. H. R. Aldridge said that during the first year after the war 200,000 cottages would be wanted. The problem was: How were they to be supplied? There were 900,000 builders in the Army, and another 900,000 engaged on Government work. Various conditions made it almost certain that cottage rents would be increased at least 4s. per week, and it was possible that the men returning home would refuse to pay the increase. The problem of how to supply the required houses must be dealt with at once.

The City of London and Improvements.

For some little time the City Corporation has been in debt for a very heavy sum on its improvements account. Indeed, the deficit has figured as high as £70,000, a formidable total in view of the value of money. City ratepayers, therefore, will welcome the announcement now made that, by virtue of the payment of a large outstanding amount by the London County Council, and of the sale of a large block of surplus land, the equilibrium has at last been restored. In fact, the two sides now, to all intents and purposes, balance each other. This serves to solve a problem that for a long while has been the cause of considerable anxiety to the City Fathers.

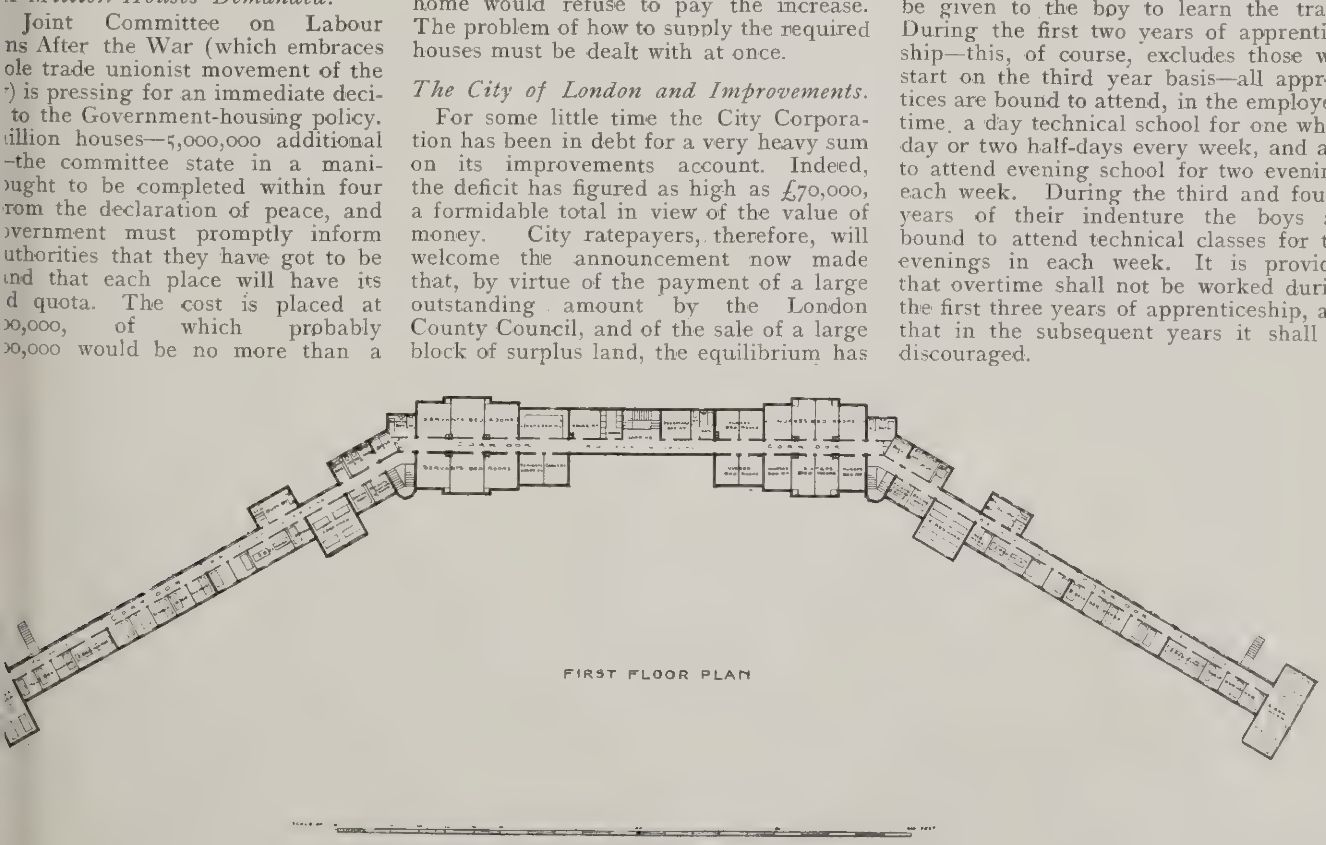
Irish Housing.

It is understood that the Irish Local Government Board do not consider it necessary to issue a circular to the local authorities in Ireland on the housing question, such as that issued by the English Local Government Board some few days ago, or to put local authorities to the necessity or delay of answering the numerous questions set out in the schedule to the English circular.

BUILDING APPRENTICESHIP.

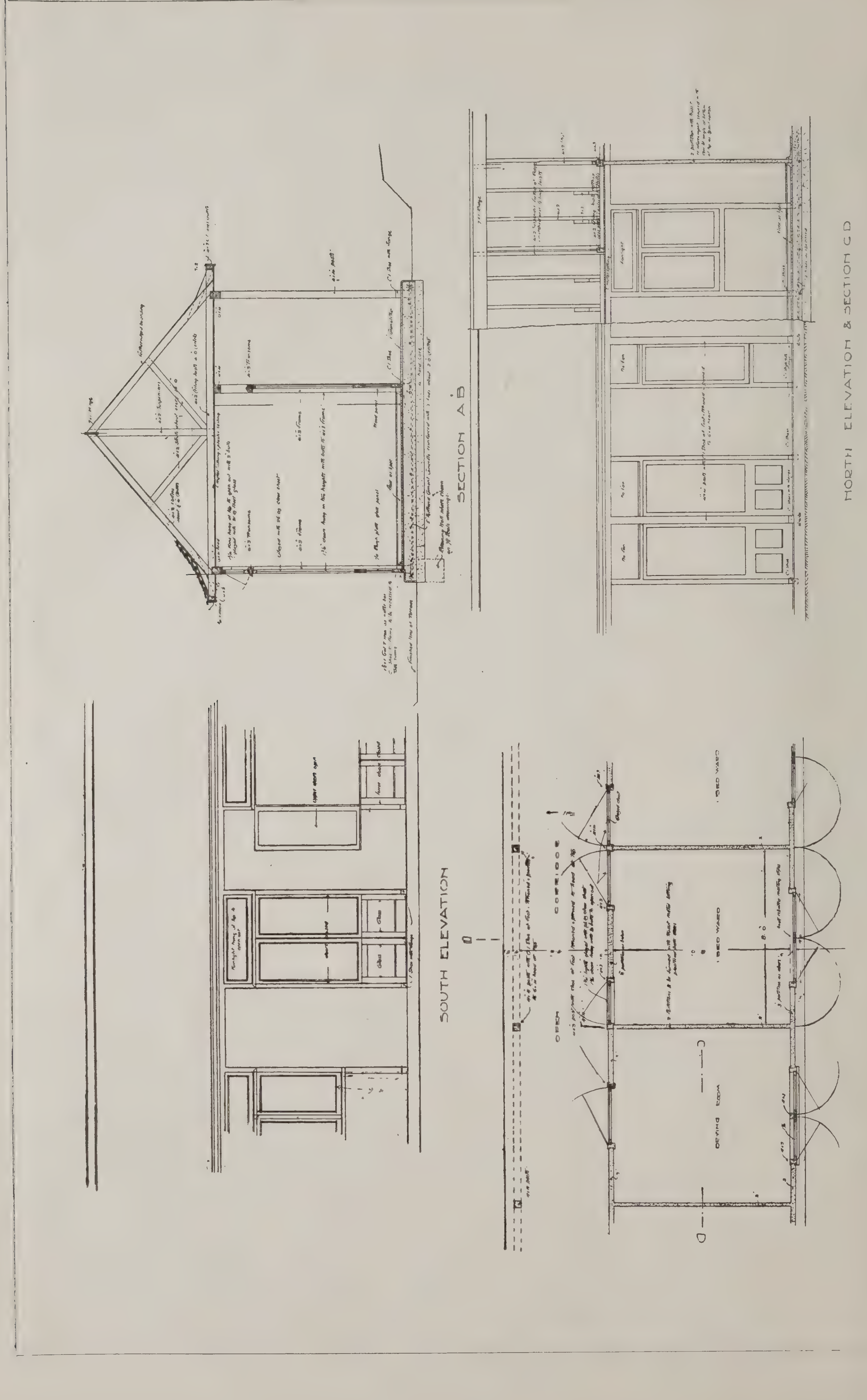
Particulars have been published of a new apprenticeship scheme designed for the building trades. The interesting feature of this scheme is that it involves a re-constituting of indentureship and a reciprocal contract by the employer to furnish the apprentice with every opportunity to learn the trade thoroughly. The indenture period is for five or six years, but if a boy has satisfactorily completed a two years' course at a day technical school where instruction is given on the lines of the Brixton School of Building and has obtained a certificate of proficiency from the principal, the period so spent is to count as part of the apprenticeship, and the apprentices will start at the third year's rate of wages. Where no premium is paid the wages are to range from 6s. 6d. a week in the first year to 34s. 6d. in the sixth year.

The training is to be of two kinds: (1) In the workshop and on jobs, and (2) in the continuation school. The employer undertakes that every opportunity shall be given to the boy to learn the trade. During the first two years of apprenticeship—this, of course, excludes those who start on the third year basis—all apprentices are bound to attend, in the employer's time, a day technical school for one whole day or two half-days every week, and also to attend evening school for two evenings each week. During the third and fourth years of their indenture the boys are bound to attend technical classes for two evenings in each week. It is provided that overtime shall not be worked during the first three years of apprenticeship, and that in the subsequent years it shall be discouraged.



LENHAM SANATORIUM, KENT: FIRST-FLOOR PLAN.

EDWIN T. HALL, F.R.I.B.A., AND E. STANLEY HALL, M.A., A.R.I.B.A., ARCHITECTS.



LENHAM SANATORIUM, KENT: PLAN, ELEVATIONS, AND SECTIONS OF A ONE-BED WARD.

.BERDEEN'S PROPOSED WAR MEMORIAL.

Гhe proposal for the erection of a memo- l to those who have fallen in battle be- .ging to Aberdeen and district has now :en concrete shape. At the meeting of Finance Committee of the Town uncil drawings of the front elevation ɨ the interior of the proposed memorial he work of Dr. Marshall Mackenzie— 'e submitted.

ls the proposed memorial is intended fit in with the Art Gallery extension eme, the Council have to co-operate to ıe extent with the Art Gallery Com- tee, who will have a voice in the carry- out of the arrangements. It is pro- ed to erect the memorial, as already :ed, at the junction of Blackfriars Street ı Schoolhill.

Гhe plans show a noble façade which in lf will be a conspicuous architectural ture of the district. Internally the norial hall as planned will be circular shape, and the walls are proposed to be ıelled in marble. On the panels it is :nded to inscribe the names of all those onging to Aberdeen city and district have laid down their lives for their ntry in the war.

.bout ten feet in front of the panels re will be a circular row of pillars sup- ting a balcony, and, surmounting all, fty dome, which it has been suggested ;ht be painted with some appropriate .gn by a prominent artist. The pillars to be of polished granite, and of a norial character, names being in- bed on the square base at the foot of ı. There will be an entrance from the ıtage, and also access into the sculpture rt of the Art Gallery, so that visitors to memorial hall might inspect the sculp- : collection and pictures without hav- to go outside to the gallery entrance. 'rom the balcony there will also be an 'ance to the picture galleries upstairs, that visitors may wander at leisure ngst the whole art treasures belonging ıe city. It has further been suggested in the centre of the memorial court e might be placed a replica of the ous piece of sculpture, "Victory," while :her proposal is that in the open space ront of the building there should be ed an emblematic statuary group.

ı addition to the court, it is proposed omplete the scheme by carrying out the :-looked-for Art Gallery extensions. In equence of the want of accommoda- , the industrial museum, or exhibition pplied art, has never been carried out. rooms could now be provided for this ose in Blackfriars Street, while on the :r floor a lecture hall, in which there d be hung permanently some of the t pictures in the gallery, would be at lisposal of the citizens for lectures and like.

ıe of the objects of the promoters of the me is to secure for the city the magni- t gift of over £5,000 which had been ıised by the Clerk Trustees for Art :ry extensions in the event of the re- ıder of the money required being d. It will also effect a city improve- : which is much required in that loca- and which would have a very striking t looked at from Union Terrace and n Bridge. Bailie Sinclair fully ex- that the patriotism and generosity of ublic will support the scheme, and he o make an effort to get the n Council to give as their dona- :o the scheme the site, which is valued at about £6,000, free. This would cost the ratepayers nothing, because the property was acquired some years ago with the view to Art Gallery extensions, and belongs to the Common Good. There would, generally speaking, be very little annual outlay in connection with the memorial.

As soon as the Finance Committee has finally decided upon the nature of their report, the plans will be submitted to the Art Gallery Committee for their consideration, and it is expected that immediately thereafter the public will be called upon to provide the funds required for the erection of the memorial. It is, of course, understood that the works will not go on during the war, and the interval will be spent not only in collecting funds but the information required to carry out the objects of the memorial.

In addition to the names upon the walls, it is proposed by Bailie Sinclair to compile an alphabetic roll, with short biographies printed on vellum of all those whose names appear on the walls. This roll of honour when completed will be a unique feature of the memorial itself, and will enable visitors and relatives to trace upon the walls the names of their friends.

Aberdeen is to be congratulated on this magnificent project. No doubt other great cities, stirred with a spirit of emulation, will hasten to follow the fine lead which is thus provided.

TRAINING CENTRES FOR MUNITION WORKERS.

A number of readers having asked for information with regard to schools of instruction in munition making, we print below a tabulated list of these centres (kindly supplied by the Ministry of Munitions), indicating the particular class of work that is taught at each.

LONDON.

School.	Address applications to	Type of work.
Acton and Chiswick Polytechnic.	R. Bray.	Plate metal work and welding.
Battersea Polytechnic.	Dr. F. H. Newman.	General machine work.
Brixton School of Building.	J. C. Smail, L.C.C. Education Offices, Victoria Embankment, W.C.	General and advanced machine work.
East Ham Technical College.	W. H. Barker.	General machine work.
Erith Technical Institute, Belvedere Road, Erith.	W. Neagle.	General and advanced machine work.
King's College, Strand, W.C.	Professor Jameson.	General and advanced machine work.
Regent Street Polytechnic.	Major Mitchell.	Electrical repair work.
Shoreditch Technical Institute.	J. C. Smail, L.C.C. Education Offices, Victoria Embankment, W.C.	General and advanced machine work and drawing office work.
Willesden Polytechnic, Priory Park Road, Kilburn, N.W.	A. J. Bird.	Woodwork for aeroplanes.
Wimbledon Technical Institute, Gladstone Road, Wimbledon, S.W.	W. Harwood.	General machine work.
Northampton Polytechnic, Clerkenwell.	The Secretary.	Optical munitions work.
	BIRMINGHAM.	
Aston Technical School, Whitehead Road, Aston.	Chas. White.	General and advanced machine work.
Birmingham Municipal Technical School, Suffolk Street, Birmingham.	Dr. W. E. Sumpner.	General and advanced machine work.
Handsworth Technical School, Goldshill Road, Handsworth.	W. E. Harrison.	General and advanced machine work.
	PROVINCIAL.	
Bath Technical School, Guildhall, Bath.	A. Godfrey Day.	General machine work.
Bradford Technical School.	W. M. Gardner.	General and advanced machine work.
Darlington Technical School.	A. C. Boyde.	General machine work.
Derby Technical School, Derby.	Wm. Cooper.	General machine work.
Gillingham Technical Institute, Gillingham, Kent.	R. L. Wills.	General machine work and Government Dockyard work.
Leeds Technical School.	R. E. Barnett.	General machine work and acetylene welding and fuselage.
Lincoln Technical School.	A. E. Collis.	Plate metal and general machine work.
Liverpool Technical School.	J. G. Legge.	Fuselage and welding.
Loughborough Technical Institute.	H. Schofield.	General and advanced machine work.
Rutherford Technical College, Newcastle-on-Tyne.	P. Sharp.	General machine work.
Nottingham University.	J. E. Shimeld.	General machine work.
Plymouth Technical School.	E C. Cook.	General machine work and Dockyard work.
Portsmouth Technical College.	O. Freeman.	General machine work and acetylene welding.
Reading University	H. Maryon.	General machine work.
Smethwick Technical School.	R. W. Hutchinson.	General machine work.
Tunbridge Wells Technical Institute.	Dr. Lister.	General machine work.
Walsall Municipal Institute.	F. E. Thompson.	General machine work (various).
Wednesbury Technical Institute, Kendrick Street, Wednesbury.	W. Macfarlane.	General machine work (various).
Wellingborough Technical Institute.	A. J. Ensor.	General machine work.
York Technical School.	J. H. Mason.	General machine work.
	SCOTLAND.	
Aberdeen, Robert Gordon's College, Aberdeen.	Chas. Stewart.	General machine work.
Glasgow, Royal Technical College, Glasgow.	H. F. Stockdale.	General machine work.
Fife (Cowdenbeath) Mining School, Fife.	J. Parker.	General machine work.
	INSTRUCTIONAL FACTORIES.	
Government Instructional Factory, Lancaster Street, Birmingham.	H. Hubble.	General and advanced machine work.
Aero Engine Instructional Workshop, Twickenham.	M. C. Flemyng.	General and advanced machine work.
Buckman School, 2, Whitechapel Road, E.C.	H. Purdy.	General and advanced machine work.

NEW STAINED-GLASS WINDOW IN SELBY ABBEY.

The stained-glass window which Colonel T. G. Hawdon, senior vicar's warden, has presented to Selby Abbey in memory of his brother, the late Mr. Joseph Hawdon, has been completed and inserted in the east window of the south choir aisle. The new window forms a beautiful addition to the abbey. The vicar and the donor were anxious when the window was completed that the old glass should be incorporated. This gave the designers a chance of executing a window of the same date as the old glass, that is of the thirteenth century, and this is what they have done. Their study was facilitated by the fact that the great east window is of the same date, and therefore was a guide to strength of colour and design of detail. The characteristic of stained glass of the thirteenth century was the amount of yellow used. In fact, pot metal yellow had not disappeared at the time that golden stain came into use; hence the date is specially rich in various tones of golden effect. Every inch of the old glass has been used with the new. The centre tracery piece containing the arms of one of the sons of Edward III. was complete and has been replaced. The heads of the lights were also largely intact, and the remaining pieces of the old glass were inserted in other places.

The middle light of the memorial window represents St. William of York (1154). Below this light is a scene depicting the Saint crossing the Ouse Bridge at York, and the miracle that took place when the people who fell into the river were saved by his intercession. The side lights contain the figures of St. John of Beverley, and St. John of Bridlington. Under the figure of St. John of Beverley (718), is a scene representing him giving instructions to the Venerable Bede. Beneath St. John of Bridlington (1379), the scene portrays the Bridlington Canons beseeching him to be Prior, a distinction which, in his humility, he refused.

The window is the work of Messrs. John Hardman and Co., of Newhall Hill, Birmingham.

THE WAR MEMORIAL PROBLEM.

In the course of a long letter to "The Times," Mr. Pittendrigh Macgillivray makes out a strong case for delay in the execution of war memorials. Frankly, he says, the war memorials business is likely to become rather a terror throughout Europe unless the financial condition of the nations proves such as to hold it in check for a time—for such a length of time as will allow some measure of the inevitable blatancy and vulgarity to evaporate. Victory, we believe, will be ours, and there is little doubt that the most obvious symbolic perpetuation of it, as in all great days of the past, will be at the hands of sculptors. Out in the open, fronting the sun, in the midst of our most public places, their documents of bronze, marble, and granite are to be an enduring record of the event.

In this aspect war memorials become a serious concern to the nations. Nowhere ought they to be undertaken lightly. They should not be the product of an immediate outburst of foolish extravagance and jingoistic enthusiasm. Those who love sculpture and appreciate the high moral nature of monumental art and who have visited Berlin will remember the vile war monument there and the horrible gilt bronze statuary in the War Museum. The victory of 1870 was commemorated in the capital of Germany by sculpture in the worst and most objectionable terms and spirit. Needless to say, the German sculptors reflected and created in the spirit of their people; and the Nemesis of that spirit which is behind the atrocious war monument of Berlin, with its bracelets of French cannon, thunders upon the people of Germany to-day!

Certainly we must wait until the war is over before beginning its memorials. For better reasons than the return of our young sculptors from their noble duties at the front; we must wait. We must wait for a calm and a long, wise outlook as to the true nature of the things we want to have set down in bronze and granite for all time. We should wait until mere realism of matter and incident becomes transmuted into poetic symbols and expressions of psychologic value and ennobling effect. The Parthenon is the greatest war monument the world has ever seen; it commemorated the turn of a tide against Liberty relatively as vast as the present, yet it was not begun until 25 years after the victory. If there is haste, and urgency, and vainglory at work, the country is pretty certain to get an incubus of uniformed figures and up-to-date snapshot incidents far removed from any reminiscence of the art of Alfred Stevens and Alfred Gilbert, the two English sculptors justly quoted as "masters" by Sir George Frampton.

BUILDING MANAGER DECORATED.

We publish on this page a portrait of Mr Herbert L. Costa, manager of the building and electrical departments of Harrods, Ltd., who has been personally decorated with the Cross of Chevalier of the Order of Leopold II. by H.M. the King of the Belgians, near the firing line, for services rendered since the outbreak of war, in connection with building and engineering operations carried out for the Belgians by Harrods, Ltd. One of these operations was the construction of the famous group of hospitals over which Dr. De Page presides, and which are considered to be one of the most complete installations at the front.

MR. HERBERT L. COSTA

(Manager of Harrods Building and Electrical Departments).

WOOD-WORMS IN WESTMINST HALL.

An attack was delivered last w
against the wood-worm which has dama
the timbering of Westminster
throughout our centuries. "The nam
this interesting creature," said Mr. Fr
Baines, architect to the Office of Wo
"is *xestobium tessellatum*, and it does
its destructive work while in the la
stage. As a beetle it is harmless—a
grub—well, I could bury you waist-dee
some of the holes it has made in the
work of the hall. It lives only in oak.

"Mr. J. King, M.P., made an exam
tion of the hall some time ago, and cam
the conclusion that the damage was
paratively recent; but I am convinced
it has been going on for more than
years. Some of the patching done a
dred years ago has been attacked.
other methods of exterminating *xestob*
tessellatum having failed, I called in
assistance of Professor Maxwell Le
and he invented a spray, which is co
tuted thus—50 per cent. tetrachloreth
6 per cent. cedarwood oil, 2 per cent. sol
soap, 2 per cent. paraffin wax, and 40
cent. trichlorethylene.

"The first is a perfect insecticide, a
so dangerous that those who handl
must use gas masks. The cedarwoo
protects the wood against future att
and the scent impregnates the timber
keeps the beetle away. The soap hold
oil and renders the wood non-inflamm
and the paraffin wax prevents che
action. The trichlorethylene is a so
and diluent—and is itself a feeble ins
cide.

"The roof has been sprayed with
stuff several times, but last w
drenching must have caused a
tive *battue*, and I am confident tha
plague will be effectively stayed.
drastic treatment is a last measure of
tection, and science can suggest not
further at present."

OBITUARY.

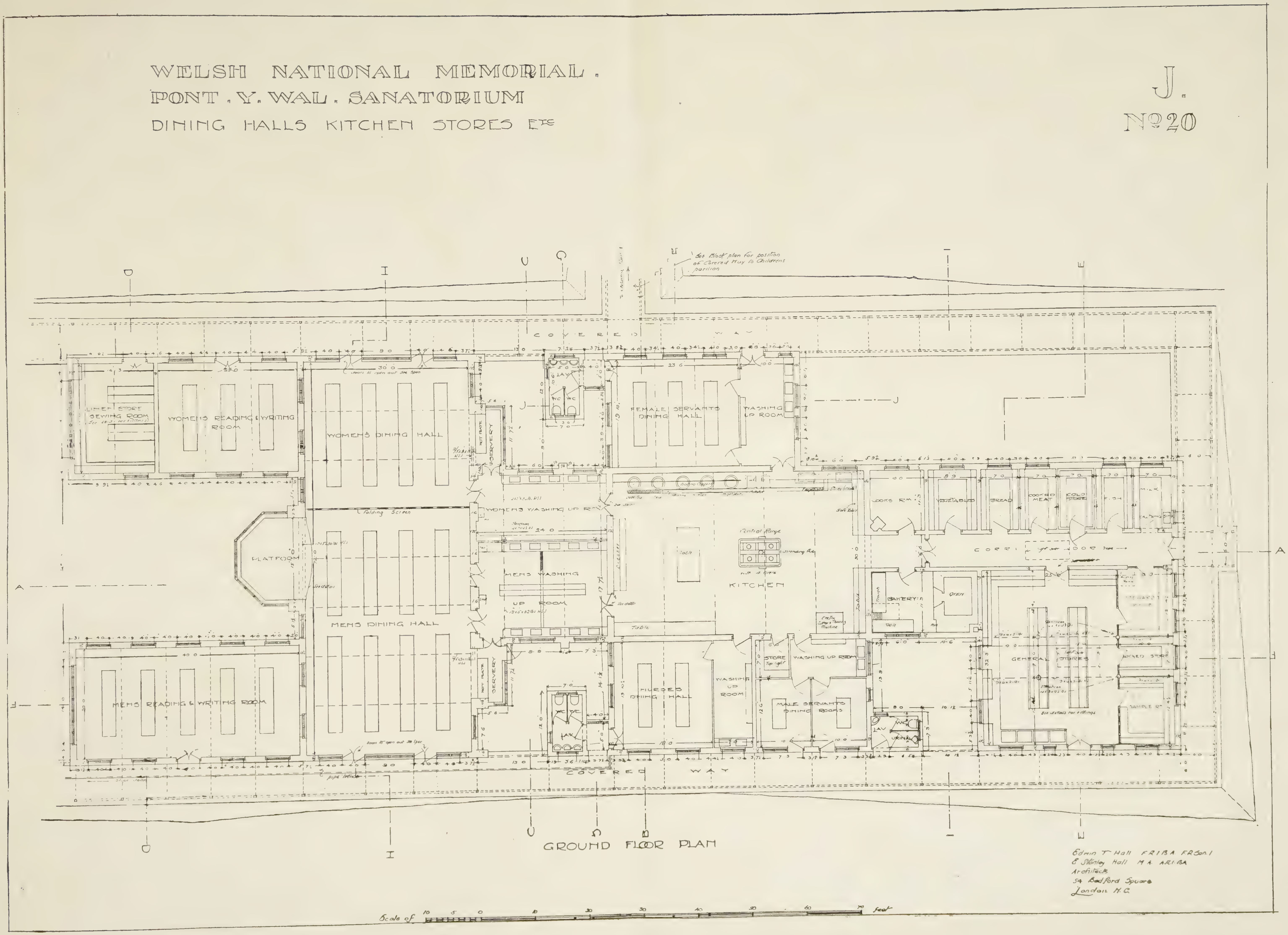
Lieut. Meurig Owen.

Lieutenant Meurig Owen, Welsh
ment, killed on August 1, was 21 yea
age, and son of Mr. Thomas John O
builder, of Llanfairfechan. He was o
the most successful pupils who ever p
through Friar's School, Bangor, whi
entered by winning an entrance sch
ship. While there he won the
Hughes Exhibition, and, as the resu
the Central Welsh Board Examinat
a county exhibition. He afterwards w
scholarship at Jesus College, Ox
where, just before enlisting, he took a
class in Moderations. After servi
France he was sent to a cadet scho
England, and on receiving his commi
returned to the front, and had been
only three weeks when he was killed.

Mr. David Williams.

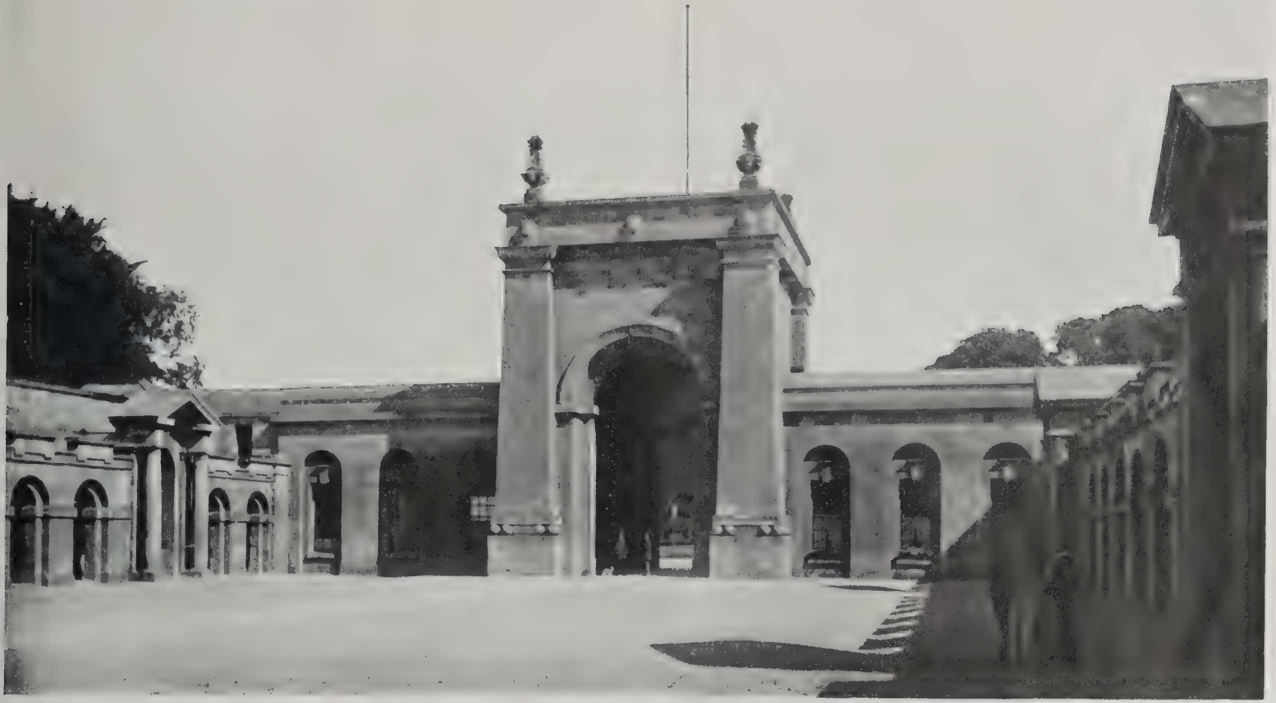
Mr. David Williams, who died last
at Swansea, was for many years ma
of the firm of Messrs. Thomas Wa
and Jenkins, and under his manage
some of the most important buildin
the county were carried out. On the
lution of this firm he carried on bus
in conjunction with Mr. W. H. Mi
Mr. Williams was born in Llanfy
Carmarthenshire. He was 71 yea
age.

[illegible]Y
OF THE
[illegible]ITY OF ILLINOIS

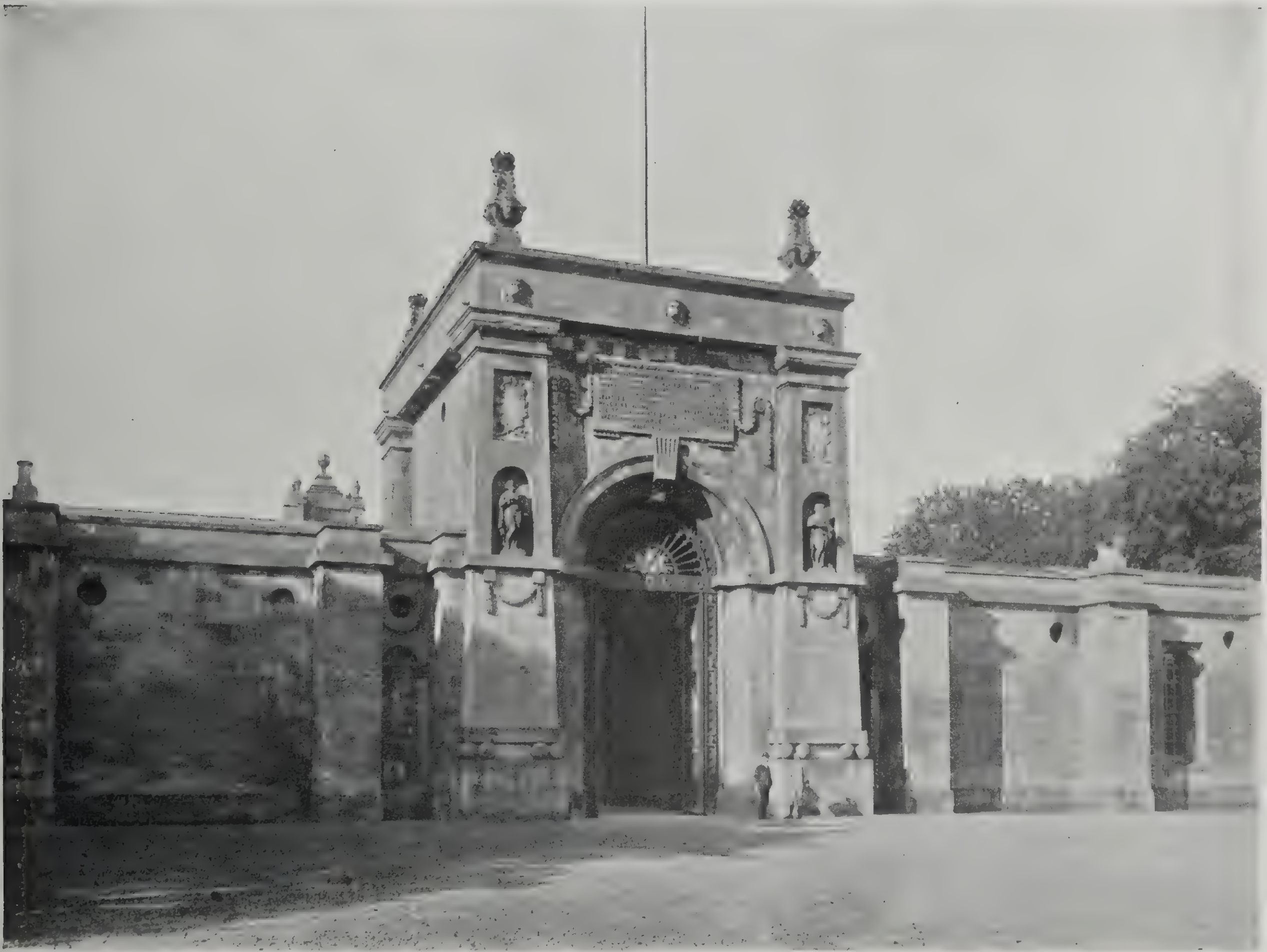


ARCHITECTS' WORKING DRAWINGS (SERIES II.). XLVI.—WELSH NATIONAL MEMORIAL, PONT-Y-WAL SANATORIUM: DINING HALLS, KITCHEN, STORES, ETC.

EDWIN T. HALL, F.R.I.B.A., AND E. STANLEY HALL, M.A., A.R.I.B.A., ARCHITECTS.

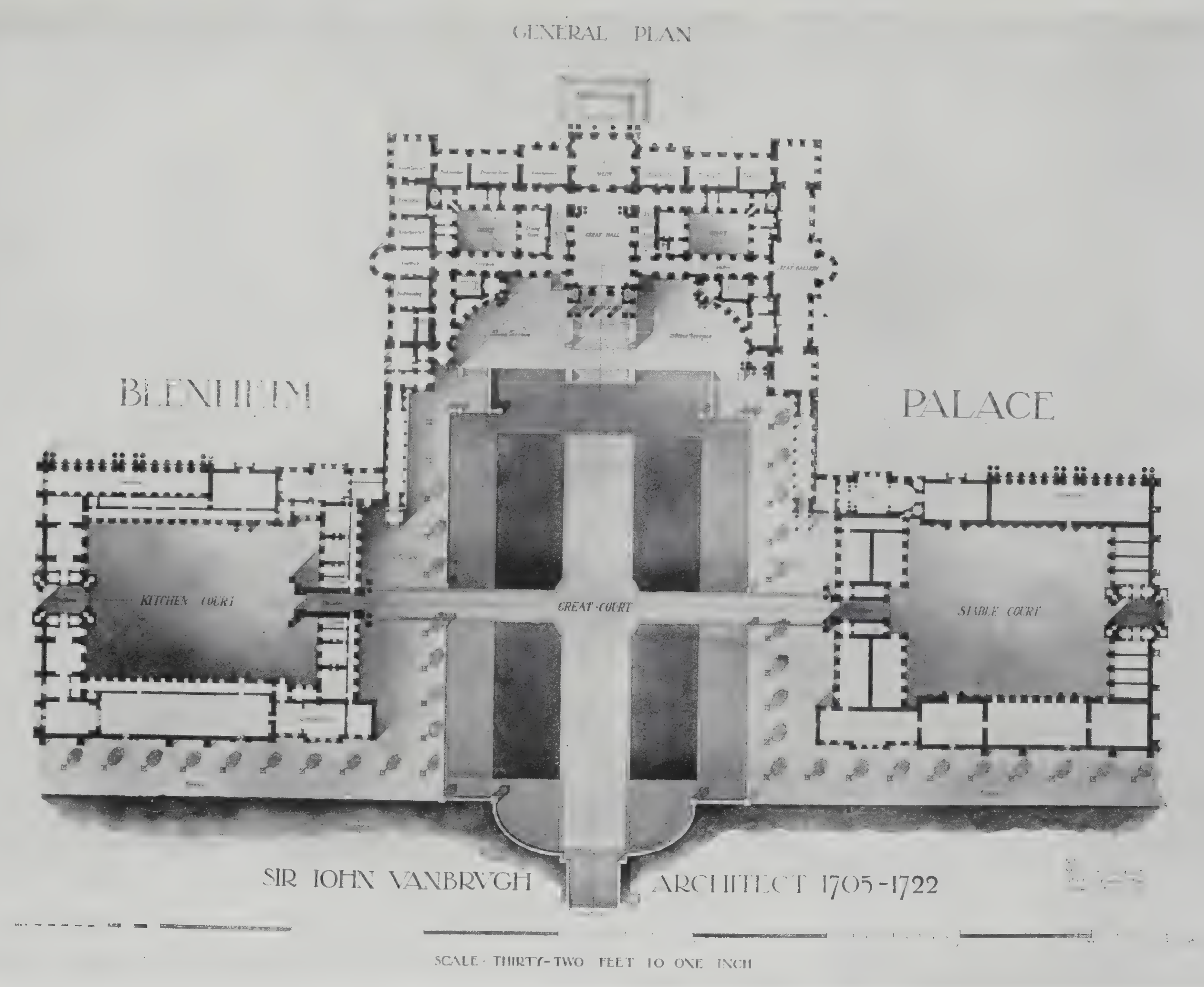


View in First Courtyard.



The Great Gate.

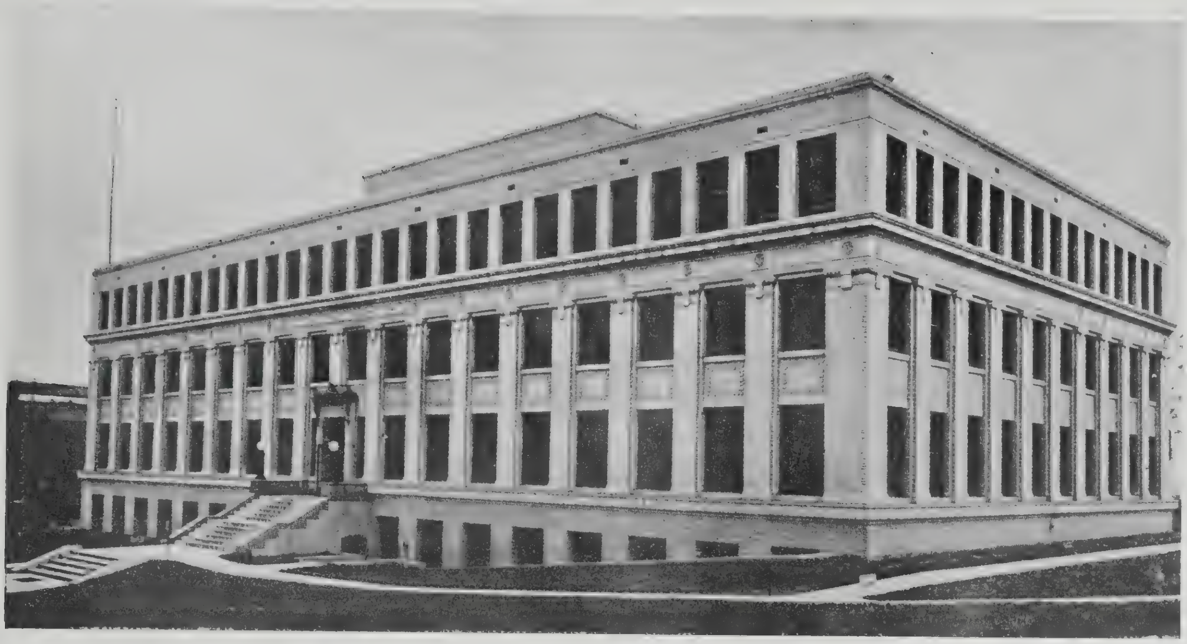
MONUMENTAL ARCHITECTURE (SERIES II). XIX.—BLENHEIM PALACE, WOODSTOCK, OXFORDSHIRE.
SIR JOHN VANBRUGH, ARCHITECT.



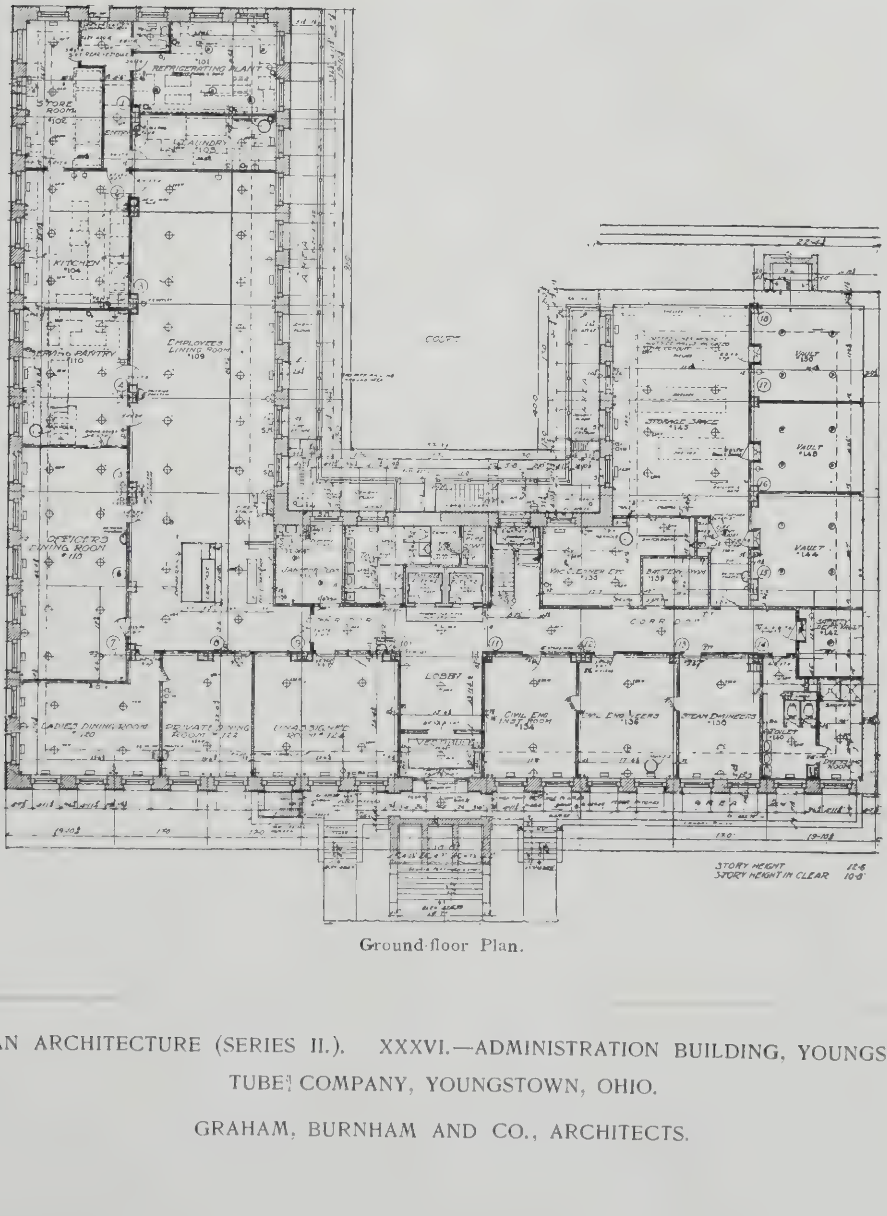
MONUMENTAL ARCHITECTURE (SERIES II.). XX.—BLENHEIM PALACE, WOODSTOCK, OXFORDSHIRE: GENERAL PLAN.

MEASURED AND DRAWN BY G. W. TOWNSEND.

(*From "The Liverpool Architectural Sketch Book."*)



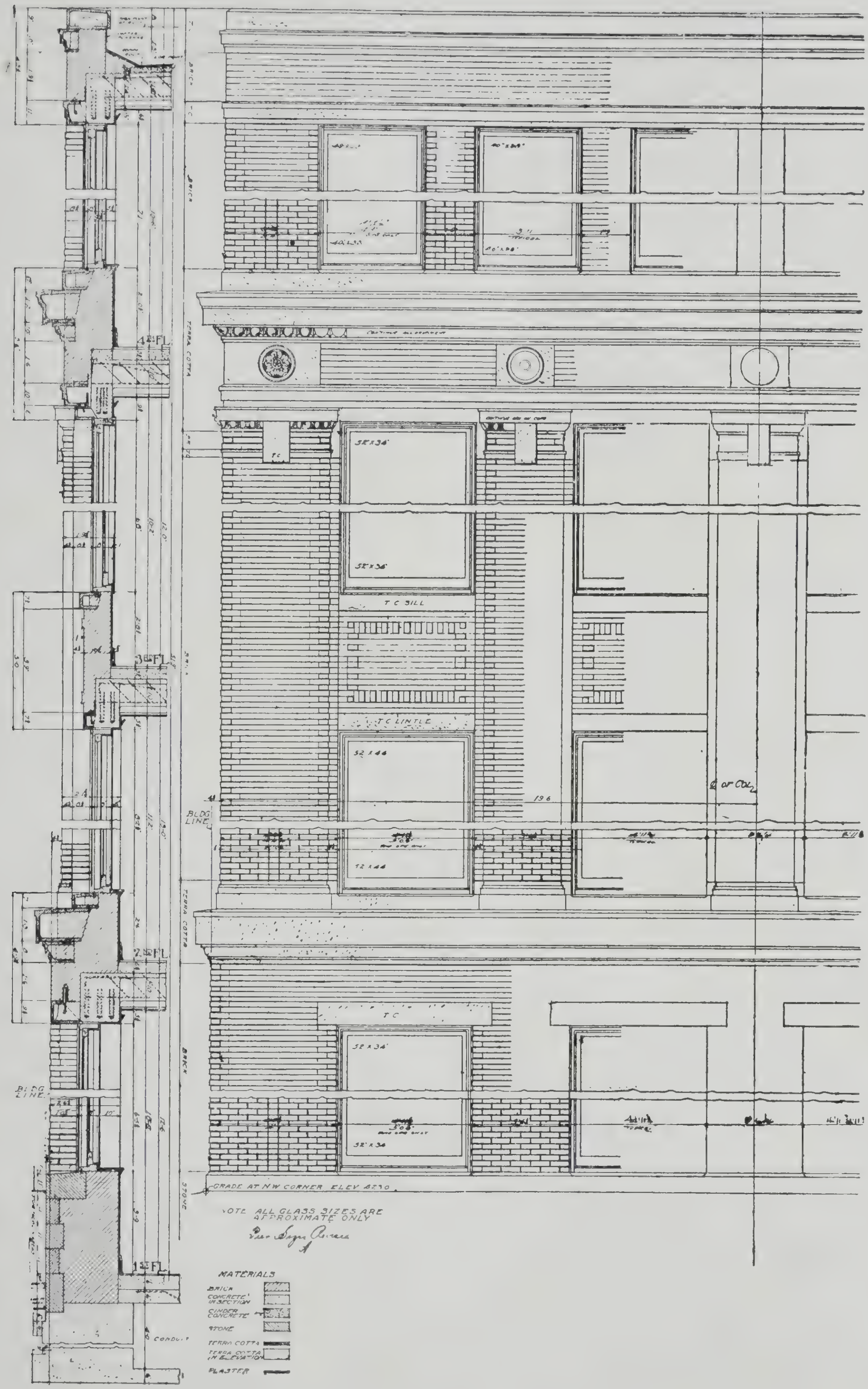
Principal Elevation.



Ground-floor Plan.

MODERN AMERICAN ARCHITECTURE (SERIES II.). XXXVI.—ADMINISTRATION BUILDING, YOUNGSTOWN SHEET AND TUBE COMPANY, YOUNGSTOWN, OHIO.

GRAHAM, BURNHAM AND CO., ARCHITECTS.



ARCHITECTS' WORKING DRAWINGS (SERIES II.). XLVII.—ADMINISTRATION BUILDING, YOUNGSTOWN SHEET AND TUBE COMPANY, YOUNGSTOWN, OHIO: PART OF PRINCIPAL ELEVATION.

GRAHAM, BURNHAM AND CO., ARCHITECTS.

[illegible]
[illegible]
[illegible]

THE ARCHITECTS' AND BUILDERS' JOURNAL.

AUGUST 22, 1917. TOTHILL STREET, WESTMINSTER. VOLUME 46. No. 1181.

BRIEF reference last week in "Here and There" to James Knowles, architect, editor, and proprietor of the "Nineteenth Century" review, ls the rather pretty story of the manner of his hthood, as told in Frederick Wedmore's mories." Knowles was on a visit at Sandring- "On the Saturday evening he had admired the gn of the cross of the Victorian Order. On the lay morning, as the guests were assembling in the ere starting to attend church service, King Edward ared upon the scene. A sword became visible, Knowles received the accolade, followed at once, remember, by the gaud—I use the word in no araging sense—the gaud he had approved of. 'This should have been done before,' said King ard, very nicely: remembering—apparently a more effectually than his responsible advisers, Government of the day, whatever it may have been e length and range of James Knowles's services." lmore has a very high opinion of Knowles, who, ays, had "no merely business faculty unusually pened, but an intellect alert and keen, a temperat receptive, tolerant, fearless, sincere." And, as omes an architect, he had a firm grasp of the ciples of art which, in his review, received a due e of attention, and was always treated in a broad liberal spirit.

* * * *

wo rather dubiously valid statements appeared last k in the always entertaining "Office Window" mn of the "Daily Chronicle." They are related : "Charing Cross is by common consent London's est bridge; do you know which is her ugliest ch? It dominates Smith's Square, Westminster." ould be comforting to believe that these assertions irrefragable; but unfortunately Blackfriars railway ge is every bit as bad as Charing Cross, though umstances have rendered the latter the more orious. It is prominence, also, rather than bad lity, that gives the queer church of St. John, Westster, a bad pre-eminence that it really does not erve. There is, indeed, a good deal of architectural it in the design; but the public, with its usual versity, refuses to see anything that is not obtruly conspicuous. It delights in making degrading parisons. Thus, to cite a few instances out of dreds, the Albert Hall was "Old Cole's -kettle," the tower of a famous Lincolnshire church Boston Stump"; and the vane intended to repret a comet is popularly supposed to be a *pediculus*, ed in that exalted position to symbolise the mean tment to which the contractor was subjected by trustees.

* * * *

imilarly the church of St. John the Divine, Westnster, with its four towers, "one at each corner," has n likened to things that are mean and vulgar—to a druped lying on its back and flourishing its feet in air, and to an overturned footstool—which objects, ept to a depraved fancy, it does not resemble in least. Always there is a legend to account for the uliarity. In the case of the four towers of St. n's the story is that Queen Anne, having commisned the architect to prepare designs, inspected them nediately after one of her unhappy encounters with ah Duchess of Marlborough, by whom, having en, as usual, greatly worsted, the Queen took her revenge on the unfortunate architect. She tore his drawings into shreds and flung them at his head. Meekly he asked what, then, was her Majesty's pleasure? She kicked her footstool upside down and said, pointing to it in derision, "Bah! build me a church like that!" And it was so. Of the same character is the legend of the sundial motto. A boy was sent by the sundial-maker to ask the great man what he would have for the motto. Being busy and petulant, the great man exclaimed, "Begone about your business!" which is a very good motto for a sundial, and in all good faith was adopted. These are tales of Hofmann told to the children by the genial uncle whose inventiveness is superior to his knowledge of the immediate object of inquiry; and they spread and become popular. Nevertheless, St. John's, Westminster, is certainly not the ugliest church in London. Would that it were!

* * * *

Architects and decorators will be glad of Mr. H. E. Trevor's handsome gift to the Victoria and Albert Museum of the bedroom furniture of his illustrious ancestor, David Garrick. All the furniture is of what Sir W. S. Gilbert would have called "a greenery-yallery Grosvenor Gallery" tone and there are figures and landscapes in what the eighteenth-century exquisites would have described as being "in the Chinese taste." Garrick was a bit of a dandy in his interior as he was in his personal decorations. Was this furniture perhaps included among that which Garrick showed with swelling pride ill-disguised to his old schoolmaster, Dr. Samuel Johnson? That worthy, it will be recalled, shook his jovian head and "improved the occasion" with the somewhat ambiguous comment, "Ah, Davy, Davy! The possession of such treasures will make it harder for you to die." Dr. Johnson would have more force as a moralist if he had been less of a wet blanket; in which character he should not have appeared in Garrick's bedroom.

* * * *

Nor should that wicked bugbear of builders and architects, dry rot, have the profanity to show its malign face in church, where, however, it makes frequent attendance, to the consternation of minister and congregation. It even has the audacity to invade the pulpit—not always physically, *bien entendu*. Letters to the editor of the "Guardian," which with great delicacy he heads "Fungus in a Church," show that nothing is sacred from *merulius lacryma*. "Churchwarden" having described the symptoms, the vicar of Keresley, Coventry, sagely diagnoses the case as dry rot, and adds, "I believe that radical measures alone can prevent this pest from spreading and eventually ruining all the woodwork of the church. In our church here," he writes, "the whole of the floor on one side was very badly affected with dry rot, both boards and joists. In many spots these had broken in, and the oak pews had begun to be spoiled. The worst boards had been replaced in recent years, but the new ones soon became as bad as the rest, and now, acting on professional advice, the churchwardens are having the whole of the affected area relaid with a bed of dry earth well rammed, a double layer of coarse and fine cement, and a woodblock floor."

* * * *

Dry rot spreads so rapidly and ruinously that the first symptom of it should be reported without a day's delay to the nearest qualified architect, who, if he knows his business, will be able to effect a cure. Merely to put down new boards in substitution for those that have been attacked is simply to add fresh fuel to the flame. Ignorant carpenters frequently do this, unless their work is supervised by an architect who knows the conditions that favour dry rot and will take care to remove them. Yet so insidious is the pest that the utmost precautions will not invariably prevent it, although courts of law always assume that it is absolutely preventable, and decree that the architect who fails to prevent it shall be mulcted in damages. It seems certain, nevertheless, that outbreaks of the disease are occasionally quite inexplicable upon any theory of negligence; and it may therefore be roundly asserted that the only absolutely certain way of preventing dry rot is to dispense with woodwork.

* * * *

Less heroic treatment is recommended by the vicar of Halesworth, who writes: "Paint small patches with corrosive sublimate, only do it yourself—it is deadly poison. Open wide ventilation and syringe under the boards with gas-water; do it on a Monday—it smells. Put plenty on, and do it a second time in three weeks." Good advice as far as it goes; but the efficacy of merely local lotions that are obnoxious to the fungus depends upon their frequent renewal. As soon as they volatilise, the wily fungus, lurking somewhere out of reach, returns to the attack. Thorough ventilation seems to be the most deadly enemy, and if this is provided, and is not nullified by impervious coverings such as linoleum, all may be well. To substitute sound wood for that which is decayed, instead of effecting a radical cure by altering the conditions that caused the mischief is sheer waste of money.

* * * *

A dismal picture of the city of the future is drawn for us by a writer in the "Evening News." He asks whether the architect of the future will take into consideration the possibility that developments in aviation will render obsolete all present methods of building. "Will all the thousand and one types of building that go to make up a large city be designed with a view to rendering them bomb-proof? Will the tiled roof, the spire, the minaret, and the graceful façade be condemned as a peril to the nation, and be replaced by an unlovely exterior of armour-plating?" Taking these questions seriously, we will venture to suggest, with all diffidence, that the answer is in the negative. "Thousand and one" may pass for a round rhetorical term; but by a similar process of exhaustion which enabled the author of "The Diversions of Purley" to reduce the parts of speech to the very convenient number of one, we take leave to assert that the "types of building," as we understand the expression, hardly exceed half a dozen—indeed, a rigid purist might reduce them to two—those with and those without roofs; but the point has no interest except as an indication that the writer is handling his subject rather loosely.

* * * *

In what should be the holiday season, when fancy grows frivolous, one is tempted to follow up this irresponsible hint at unlovely armour-plated houses. Armour plates, to be effectual, would have to be "developed" as wonderfully as the aviation of the future. But our prophet has surely missed a fine chance of making a palpable hit. When aviation, "now in its infancy," is full-grown, then, he says, "under a really formidable assault the great cities of the world, as at present constructed, would disappear in a cloud of brickdust." When the dust settled, the surviving aviators might shovel it into bags and temporarily solve the reconstruction problem without prejudice to the armour-plate system. But why have the "tanks" been left out of consideration? They seem to be reasonably bomb-proof, and, in a double
sense, very hard to hit. Van-dwellers can never
made to understand why houses should be roote
the soil. Supposing, when the cities disappear in a cl
of brickdust, we do not build them up again, but t
to tanks, and scatter ourselves widely, living no lon
in massed formations, but in open order. That w
be a little more sanitary than taking to the sewers
Mr. Wells's worldlings did when attacked by
Martians. If tanks and tubes fail us, then ther
nothing for it but to live either in submarines or in
craft, in either case geting a fighting chance, whic
denied us while we herd together in frail and hud
houses.

* * * *

This "mere midsummer madness" has in it, howe
a sound kernel. That the advance of aviation will
foundly modify design there can be no question,
the problem is no doubt exercising many minds
world over. In the meantime, the more immed
needs of the situation are being met in the simp
possible way. Many banks and other import
buildings are forming bomb-proof shelters in w
sandbags are the main element; the great objectio
them being, of course, the enormous amount of sp
they occupy; and in cities "where merchants most
congregate" every inch of space is precious. It
be confidently anticipated that before long system
bomb-proof shelters will be patented, and that r
forced concrete will seldom or never be omitted f
the specifications.

* * * *

We note that many shops and other business
mises in London are displaying in their ground-f
windows a card offering shelter to members of
public during air raids. The proviso is wisely ad
that all who take advantage of this privilege do s
their own risk. It is doubtful whether any ordin
building can ensure perfect immunity from ha
Reinforced concrete buildings are, of course, the sa
of all, but even with these there is an element of
designers naturally not having taken into account
possibility of their structures having to withstand
shock of a high explosive bomb hurtling down f
an altitude of many thousand feet. Very few bu
ings, we imagine, would remain undamaged unde
direct hit from a bomb dropped from any considera
height.

* * * *

Concerning the ingenuity of architects, a writer
weekly periodical for women has paid a
ambiguous compliment to certain members of the
fession. Benevolent agencies, such as the Society
Friends, are doing splendid work in the devasta
districts of Belgium from which the Boches have b
driven out. "The first crying need was houses,
one cannot build permanent brick-and-mortar quar
in a devastated land in the midst of war. So tw
three architects put their heads together and desig
neat little wooden houses. . . ." Excellent:
one cannot help a wistful regret that the record was
expressed with a more dexterous avoidance of
venerable jape about the wooden things that we m
"out of our own heads," with material held in reserv
material that has been called "noble," but is unfo
nately subject to the ravages of dry rot.

* * * *

By an unfortunate slip Mr. Arthur T. Bolton's
was given as forty-three instead of fifty-three in
note which appeared in our last issue announcing
appointment to the Curatorship of the Soane Muse
Mr. Bolton writes: "You have added ten years to
life by subtraction. . . . 1864 was my birth y
a date which it is now too late to alter." But e
fifty-three is not old as curators go, so we may still w
Mr. Bolton many years of useful service at the So
Museum.

HERE AND THERE.

s very odd, when you come to think of it, that all
ur common actions are done rather badly, or, at
ll events, seldom in the best way—walking and
ng, for instance, or sitting or standing, or holding
n. We do not study these things, and one is
st tempted to ejaculate, Heaven forbid that we
d! For what we gained in correctitude we
d lose in character. Yet erratic movements are
vasteful to be tolerated in business. In all
inery they are eliminated to the utmost, except
e human machine, which, having a will of its own,
ts interference. Your true-born British workman
lown tools on the smallest provocation. Tell him
ne does not know how to hold them or to use them,
ne will immediately assume a pugilistic attitude—
died, but fairly effective, and sufficiently "expres-
of its purpose."

* * * *

once heard a builder's foreman tell a bricklayer,
u're not keeping your perps." "Ain't I," says
y. "You kin gimme me ha'pence, then."
ng received his "ha'pence," he said to the fore-
"Now take off yer coat. I'll perp yer." And
set to, but not very scientifically; and there were
al instances in which first one and then the other
l signally "to keep his perps." It was a sad waste
ne and energy: for—need it be said?—every man
boy on the job stopped work to see "fair play."
he clerk of the works, being gently but firmly
aded not to interfere with the sport, hurried off to
the police. Such interludes are less common
they used to be; but I understand that "a good
ght left" is still regarded as a substantial qualifi-
n for the builder's foreman who is at all particular
t keeping his perps.

* * * *

partee is another essential item in his equipment.
can speak in forcible tropes and figures, and has
oad streak of satire, he can even dispense with
hemy, which may, on occasion, be an effective
vant of these higher qualities of the intellect, but
very poor substitute for them. I have noticed that
nents between foreman and workman are usually
ucted in delicately indirect innuendo. A painter
explaining how and why he "chucked his job" on
dge over the Thames: "When I gits up, I finds as
's only a six-inch plank atween me and kingdom-
. So I marnders down into the yard to g
ner stick or two of firewood. Of course old Rasp-
was nosing about. So he comes up and says,
at the Gehenna do you suppose you're doing down
?' he says. "I thought you was a painter?' he
'When I wants further assistance in the timber
rtment,' he says, 'I'll send round to the Labour
nange,' he says; 'so you shin up aloft, sonny,
e you belong, and look slippy about it.' So I
at him pretty old-fashioned, and I says, 'Yus,' I
'I should look pretty slippy tangoing about on a
nch plank half-way between heaven and Hades,' I
'Old Father Thames 'ud larf 'earty enough,
no doubt, but the coroner 'ud see that you didn't
mighty wide at the inquest—not wider than a
nch plank, old sport. I've got a wife and family,
ve, and my life ain't insured for more'n 'arf a
on. Give the wife and kids 'arf a chanst.' Old
berry gits ratty. 'Look 'ere, young feller-me-
he says, 'I don't employ no stage carpenters on
ob, and you ain't agoin' to erect no perlitical plat-
on my bridge, nor no blinkin' ball-room floor—
er waxed nor Ronuked,' he says; 'so you kin take
om me.' 'What I'm agoin' to take from you is
of yer lip,' I says, 'but I'll take my ha'pence up
te, if it ain't troublin' you too much, and I won't
ruin the exchequer.' 'Don't you worry about that,' he says; 'I shall be delighted to get shot of you, and there's enough left in the heel of the old stocking to pay-off forty-eleven funks like you.' 'Funks,' I says, takin' 'im up; 'if you was ten years younger I'd talk to yer about funks: but I don't want to be 'ad up for manslaughter—like you'll be when my substitoot mistakes your perlitical platform for a divin' board.' So he brasses up, and I tangoes off. Well, you see, I reckon it had to be sudden death one way or the other, and I wanted to do without the inquest.'"

* * * *

These examples are, I think, fairly typical of the touchiness of the British building operative. He hates above all things what he calls "interference." Hence any attempt to teach him better methods of workmanship than those to which he has become accustomed would lead to unpleasantness. How often does the architect watch with the sardonic amusement which has succeeded to his initial amazement the odd antics of many of the workmen who seem incapable of performing the simplest act in the most simple way—the carpenter who grasps saw, plane, or chisel, in the worst possible way, and who seems, for instance, unaware that the pressure he puts on the pulling stroke in sawing is so much wasted effort: the painter who, habitually overcharging his brush, wastes his paint and doubles or trebles his strokes in applying it—and so on to infinity. Yet the architect wisely refrains from interference of a didactory sort. His business is with the results of the workmanship, not with the mere style in which they are achieved. Education in style and method must begin much earlier in the career of the workman. It is as a boy at a technical school that he must be shown the best way of holding saw, plane, hammer, mallet, chisel, brush, and the most effectual means of economising his energy, and of controlling his motions. Not that the older artisans are hopeless. One has known them to pick up hints from apprentices who have had the advantage of more scientific instruction. Like most generalisations the proverb that you cannot teach old dogs new tricks is subject to exceptions. In the entertaining "Memories" of the Rev. Alfred J. Church, a brother of the Professor Church who believed in baryta water as a cure for the decay of frescoes in the Houses of Parliament, it is recorded that a dog turned eleven years old taught himself to beg on seeing younger dogs reap reward for the performance: and the moral is obvious. Next week I hope to refer more directly to the science of "motion study" as developed and expounded by Mr. Gilbreth.

DIOGENES.

CORRESPONDENCE.

Lightning Conductors.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—Can any of your readers state whether lightning conductors fixed to chimney stacks of houses are at all liable to draw the electricity so that the stacks themselves are injured?

A case of serious injury to chimney stacks (provided with conductors) has recently come under our notice, and on examination it was found that the brickwork was seriously damaged, several of the bricks having been quite broken, although the mortar was perfectly sound, excepting where it was actually cracked—apparently by the lightning.

The conductors are fixed in the ordinary way, and are carried up just above the pots on the chimney stacks. The house is practically a new one, having been erected quite recently.

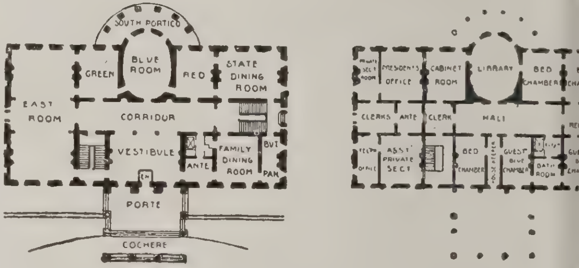
WM. WRIGHT AND SON (LINCOLN), LTD.
Lincoln.

THE WHITE HOUSE, WASHINGTON, AND ITS STORY.

THE accession of the United States of America to the Allied cause has aroused considerable interest in everything American—architecture no less than anything else—and it is natural that attention should be turned expectantly to the White House, the very hub of American activity, where decisions are every day being taken which are destined to have enormous influence upon the course and duration of the war. The accompanying notes upon, and illustrations of, the White House will therefore be studied with more than ordinary interest. The White House—the Executive Mansion, as it is officially designated—is a government and public building used primarily as the offices of the President and for official receptions; but it also contains the private apartments of the President and his family. The name by which it is popularly known is derived from the fact that in the year 1815 it was given a coat of white paint to cover the blackening caused by the burning of the building by British troops the year before.

In 1792 a prize of five hundred dollars was offered for the "best plan for a Presidential Mansion." It was awarded to James Hoban, a young Irish architect who had practised in Charleston, South Carolina. The original design by Hoban is said to have been modelled upon that of Leinster House, Dublin; but an examination of the two designs, and a comparison of Leinster House with the Executive Mansion as built, shows only a very general resemblance, and discloses a wide difference in those essentials which give special and national character. For instance, the relation of voids to solids, the finish of the eaves, the relation of the height of the basement story to the order, and the proportion and treatment of the window openings, suggest the probability that the Executive Mansion owed its inspiration not to the Dublin example alone, but to some French example; and there is the possibility—even the probability—that while Hoban was acting as clerk of the works on the Capitol, under Hallet, he profited from the criticism, and perhaps also from the books or documents in the possession of the latter, who was a trained French architect. Be that as it may, the exterior of the building bears a strong resemblance, especially as regards fenestration, to the characteristic examples of the period of the Early Classic Revival in France, and is much superior to other work attributed to Hoban.

View of South Front and West Side.

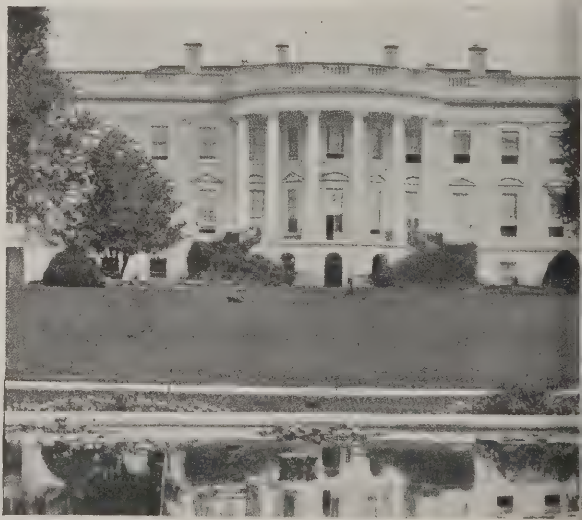


Ground and First-Floor Plans as altered.

The plan is simple and symmetrical. On the ground floor are four large reception rooms, known as the East Room (the largest) the Blue Room, the Green R and the Red Room, the first three being usec public purposes, and the last as a private recep room for the President's family. The whole eas of the building on the first floor is given up to o purposes, the offices of the President, his secret and clerks, the Cabinet room, and telegraph and phone room. The last-named adjoins the Presic office, and places him in communication with all of the world.

For many years after its first occupatior President Madison in the year 1800 the ground remained unfinished, and when the rooms were fi

The North Front.



The South Front.

THE WHITE HOUSE, WASHINGTON. JAMES HOBAN, ARCHITECT.

ated they were so badly designed as to make the iors of "The White House" a disgrace to the try. During the administration of President evelt these were reconstructed by the late Charles n McKim and constitute one of the most interest- f his many works.

THE PLATES.

il of Wrought-iron Altar Rail, Queen's College Chapel, Oxford.

IIS altar rail, if rumour is to be credited, is not the original work, that having been removed to Charlton-on-Otmoor. In any case it is a fine iple of ironwork—graceful in design and vigorous ecution.

A Museum in a Country Town.

iis design, by Mr. Cyril Cheek, was submitted in er to R.I.B.A. Problems in Design, Subject XV., Museum (detached) in the Park of a Country n." The cost of the building was not to exceed 000. Mr. Cheek's design is in two floors, the first top-lighted. The rooms are arranged with a to easy access and supervision.

Stewart Mausoleum, Woodlawn, New York City.

morials to contain the mortal remains of the dead been built by man since the beginning of history. reasons both of religion and sentiment, the human has been enclosed in stone, metal, or wood, with bject of preserving and protecting it against the ges of time and climate. The earliest and most ble examples, of course, are the Pyramids of ot, but even these gigantic mounds of stone failed eir essential purpose. In the familiar doggerel of n:—

"Let not a monument give you or me hopes,
Since not a pinch of dust remains of Che-ôps."

ay be remarked, in passing, that Byron's rhyme is lessly bad. The poet was obviously ignorant of act that Cheops is pronounced "Shops.") The ice of erecting sepulchral monuments has per- throughout the ages, and it is probably more alent now than at any other time in history, as a e at any modern cemetery will show. In Père iaise, Paris, of course, we have the highest ession of this form of monumental art. It supreme achievement which is probably ualled anywhere else in the world, unless e, perhaps, at Woodlawn, New York City, e many fine structures have been erected. We duce in this issue views and working drawings e Stewart Mausoleum recently completed in this tery from the designs of Mr. John Russell Pope. paratively small in scale and simple in design, it is ce of work that is thoroughly expressive of its ose without being morbidly sepulchral. Our ductions are made by courtesy of the "Architec- Review."

The Porte d'Alcala, Madrid.

ie Arch of Alcala stands in the street of the same , and faces the Plaza de Castelar. It was erected 78, during the reign of Charles the Third, a fact is recorded by an inscription in the oblong l over the central arch. As an architectural com- ion it is by no means unattractive, but its singular gives an undue emphasis to the horizontal nsion. The bays containing the square-shaped ings on either side seem to be unnecessary, and have been omitted with advantage. A certain f gaiety is imparted to the work by a number of htful little figures seated in various quaint atti- around the top. We regret that we cannot the name of the architect.

INDIAN ARTS AND CRAFTS AND A SCHEME TO REVIVE THEM.

IN our last issue we quoted at some length from a well-informed article on "Art and Architectural Training in India," which appeared in a recent "Times of India" Trade Supplement. The writer developed an interesting scheme by which, he suggested, the regeneration of the arts and crafts in India might be brought about. The Government, he said, should start an institution consisting of a design studio, with art workshops attached, in which an architect's designs for decorative work in Government buildings could be carried out under the supervision of a first-class designer, assisted by a staff of experts to direct the technical work of the establishment. He concludes his article as follows: Such an institution, drawing its recruits from the schools of art would exercise a healthy and progressive influence upon the instruction given to their students, and in setting the highest and most modern standard of technical training as a goal to be striven for would release the teaching of the schools from the thraldom of bazaar practice, which stands in the way of all improvement. It would be a model for craft workshops throughout the country and a centre whence capable and fully-trained designers and craftsmen could be procured by private firms.

Considerations of Cost.

Although the work undertaken by the establishment I propose would be solely that for Government, it should be conducted purely on business lines, but its accounts, though subject to strict audit, should be free from the restrictions and red tape of the Accountant-General's office. It must not be expected of its managers that they are to compete, so far as prices are concerned, with outside contractors, for the cost of the work produced must necessarily be slightly higher than that charged for the inferior bazaar work now put into buildings, though the difference between the two may be considerably lessened by improved and more expeditious methods employed in the Government workshops. Even if the cost were greater the extra expense would be fully justified when consideration is given to the substantial amount of money now thrown away upon inferior work, without any educative or artistic return whatever, and when account is also taken of the considerable sums spent upon schools of art, with such inadequate practical results. If the establishment by Government of combined studios and workshops such as I have outlined can ensure better work for the architects, raise the standard of craft work throughout the country, bring the art students into touch with practical work, and secure the Indian craftsmen and designers an adequate share of the work upon Indian buildings, any reasonable expenditure incurred will be money well spent for a truly national purpose.

Opportunity Offered by Delhi.

The present time is especially propitious for the commencement of the scheme. The erection of the Government buildings in the Imperial City of Delhi has begun, and for the details and furnishing of these buildings an immense quantity of artistic work in wood, stone, and metal and in textiles will be required, more than enough to keep the Government studio and workshops at full work for some years to come. Never since the time of the Moghul Emperors has such an opportunity presented itself of establishing a national school of design and craftsmanship, and of bringing together the best artistic and technical talent in the country to take part in the successful realisation of a great undertaking. The two eminent architects who have designed these buildings would surely welcome the establishment of such an institution to assist them in their great undertaking.

NATIONAL WAR MEMORIAL COMPETITION.

His Majesty's Government offer prizes, amounting in all to not less than £500 (in proportions to be subsequently decided), for a limited number of the most successful models for a small memorial plaque in bronze, to be given to the next-of-kin of those members of His Majesty's Naval and Military Forces who have fallen in the war. The names of competitors will not be revealed to the judges, and the name of the premiated artist or artists alone will be published. All competitors must be British-born subjects.

The following information is officially issued as a guide for competitors:

The memorial is to take the form of a bronze plaque, with an area of as near as possible 18 square in.; *e.g.*, it may be a circle of 4¾ in. in diameter, or a square of 4¼ in., or a rectangle of 5 by 3 3-5th in. The plaque is to be produced by casting from a model, which should be finished with precision. All designs submitted must be actual models in relief in wax or plaster of the size indicated. No models on a larger scale will be considered, and no competitor may submit more than two models. The design should comprehend a subject and a brief inscription. It is suggested that some symbolical figure subject should be chosen, but the following inscription has been decided upon:

He Died for Freedom and Honour,

and must form part of the design.

Since the surname of the person commemorated and the initials of his Christian names are to be engraved on the plaque, the design should be arranged so as to leave space for the name within the dimensions mentioned. In the case of a rectangular design, this space should be left at the base; if the design is circular, a margin surrounding or partially surrounding it should be left free. The design should be essentially simple and easily intelligible.

No framed models can be accepted, but each model should be packed in a small box and delivered to the Director, National Gallery, Trafalgar Square, W.C.2, not later than November 1, 1917. The model must not be signed, but should be marked on the back with a motto or pseudonym which should also be written on a sealed envelope containing the competitor's name and address. No other communication should be attached. The models to which prizes are awarded shall be the sole property of the Government, who will arrange for the appearance of the artist's signature or initials on the finished plaque.

DELAY IN DUBLIN.

Progress in connection with the rebuilding of the destroyed area in Dublin is said to be exceedingly slow. A member of the Corporation Reconstruction Committee, interviewed by a newspaper representative, said that all that can be done to facilitate the work of owners and builders has been, and is being, done. The delay, it was pointed out, was rather with the owners of property, who are chary about undertaking the erection of new buildings in face of the now prohibitive prices charged for materials. It is a fact also that in regard to quite a number of houses no plans have yet been lodged with the Corporation.

Between seventy and eighty plans have, we understand, been lodged and approved; but it is interesting to note that work in connection with only some thirty of the demolished buildings is at present in progress. Most of these houses are in Henry Street and its vicinity and in Abbey Street.

Reconstruction work in O'Connell Street, where the larger business houses were situated, is only being carried on on a comparatively small scale. Nothing has yet been done at, amongst others, Messrs. Clery and Co.'s, the Metropole Hotel, the Munster and Leinster Bank, and the Hibernian Bank. Plans have not been lodged either in connection with building on the site of Messrs. Hopkins and Hopkins, jewellers, at the corner of O'Connell Street and Eden Quay. This building had a long frontage facing the quay, and a representative of the Ministry of Munitions, when in Dublin some time back, described this as the most important site in Dublin, and stated it was most desirable that a fine building should be erected there.

NEWS ITEMS.

Workhouse Accommodation, Bakewell.

Bakewell Guardians have decided, after a long discussion, to obtain the services of an architect to consider the feasibility of providing more accommodation at the workhouse for the clerical staff, it being suggested that the casual wards might be utilised after reconstruction.

A New Shipbuilding Yard.

A new shipbuilding company, of which Sir John Ellerman is the head, has acquired a site for a shipbuilding establishment yard. It is sixteen acres in extent, fitted with railway sidings, and has accommodation for four berths. When in full working order it will employ about 3,000 men.

New Premises for the A.A.

The Architectural Association has acquired the leases of two houses in Bedford Square, where its educational work will in future be carried on. Since its formation in 1847 the Association's educational activities have grown continuously and its School of Architecture attracts students from all countries, particularly in the British Empire. It is now opening its schools to women students.

"The Western Front."

We have received a copy of the eighth part of "The Western Front." Among the topical illustrations is Plate XLI., "Panorama from the Scherpenberg." The hill of Kemmel is shown and the Messines-Wytschaete Ridge. Plate XLIII. is Mr. Bone's impression of the Vimy Ridge, the scene of the battle on April 9, while two views of Ypres form Plate LI. "The Western Front" is published for the Government from the offices of "Country Life," Ltd.

The Proposed Langstone Harbour.

The total estimated cost of the proposed Langstone Harbour, according to a statement recently made by the Mayor of Portsmouth, is about £1,500,000, but if to that be added increased cost of labour and machinery and the difficulties and cost in getting an Act of Parliament through, the cost would not be less than about £2,000,000. That would mean about £2,000 per week in interest. Would they find enough ships coming into the harbour to provide that £2,000 per week to pay interest alone? Other charges, he said, would follow in looking after the port, keeping the
and wharves in order, etc. They
want two ocean-going steamers in
day. If they could rely upon ten or t
5,000 or 6,000 ton boats coming in
week Langstone Harbour's pros
would be absolutely assured.

An Interesting Memorial Windo

A handsome stained-glass window
been erected in the parish churc
Calne, Wiltshire, by Lord and Lady
downe in memory of their son,
Charles Naire, major in the 1st
Dragoons and Equerry to the King,
was killed at the first battle of Ypr
October, 1914. Three figures are r
sented, that in the centre being
Michael, with St. George of Englan
St. Louis of France to the right and
Behind the figure of St. George is r
sented uninvaded England, while
background to St. Louis is desolate
burning Ypres.

"Pudlo" in New Zealand.

The following is an extract from
cent letter received by Messrs. Ke
Greenwood, and Co. from a fir
builders' merchants, Messrs. McLeod
Gardner, Ltd., Hastings, N.Z. "Or
our builders used a powder to water
cement on a damp section of a rough
wall. A day or two afterwards—
before the work had time to set—
was very heavy rain for two or three
when the district suffered from very
floods and upon examination of the
afterwards it was discovered that the
waterproofed cement work was quite
whereas the damp had soaked
through the old non-waterproofed
The result is that the owner is now
ing all his walls Pudloed."

Homes for the Disabled.

Mr. Hayes Fisher, M.P., Preside
the Local Government Board, has lai
corner stone of the first block of b
ings in course of erection at Fulha
homes for men disabled in the war,
vided by the War Seal Foundation F
The buildings, on a site presented by
Oswald Stoll, near Walham Green
way Station, will contain seventy-two
of rooms, in which a disabled man
members of his family will have the
of a living-room, two bedrooms, kit
and domestic arrangements, spe
designed by the architects, Messrs.
and E. M. Joseph, for the requirem
of an invalid. Wide doorways will
the passage of a wheeled chair from
room to lobby, an open balcony, a
lift, and a covered way will admit t
administrative block where curative
ameliorative treatment will be freely
vided. The inclusive rent will be 6s
weekly.

OBITUARY.

Mr. T. H. Gradon, Durham.

The death has occurred at his resid
at Durham of Mr. Thomas H
Gradon, who has carried on an exte
practice as an architect in Durham
thirty years. The third son of the
Mr. and Mrs. Geo. Gradon, of Dur
he was born sixty-two years ago.
served his articles as an architect wit
late Mr. C. Hodgson Fowler, and
assistant with several firms in the N
He went to South Africa some thirty
ago and, returning to Durham, b
business on his own account.

WAR·BVILDINGS·SECTION.

REINFORCED CONCRETE SILO AND WAREHOUSE BUILDINGS.

accompanying plans and views illus- ate some recently completed silo rehouse buildings, forming part of factory building scheme. The gs throughout have been con- d in reinforced concrete, founded nforced concrete piling.

silo building covers an area of by 200 ft., and, as shown in Figs. , consists of twenty-four cylindrical rooms, each 33 ft. in diameter by 88 ft. high, together with fifteen intersectional ones.

Fig. 5 gives a view of the basement to the silos, showing the supporting columns arranged in circular rings, and reinforced concrete outlets to the smaller as well as the larger storage rooms.

Fig. 4 shows the first half of the silo building under erection, the walls being concreted between specially constructed movable forms, supporting platforms covering the whole area, and being raised by means of screw jacks as the work proceeds.

Fig. 1 is an external view of the building completed. Reinforced concrete platforms have been formed, as will appear from the section, over the top of the silos, and the whole building has been roofed in by a reinforced concrete roof, formed in three arched spans, with flat roofs between, allowing for the necessary

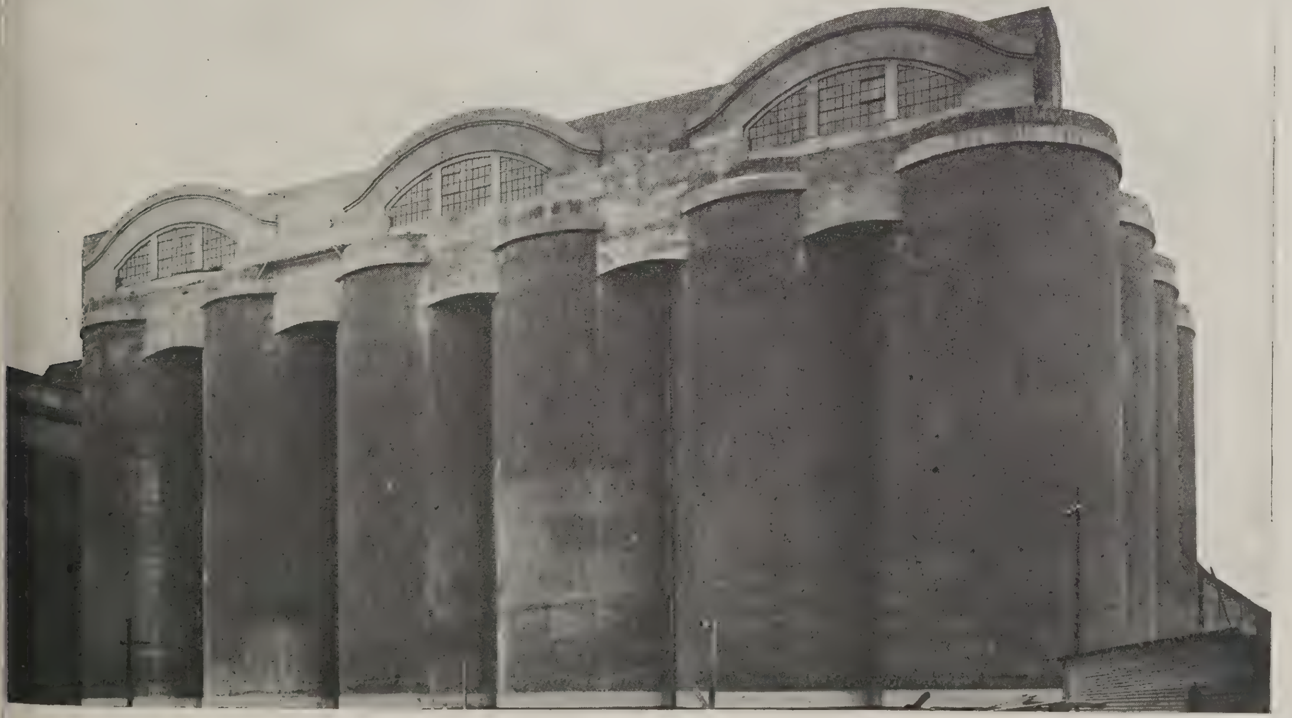


FIG. 1.—REINFORCED CONCRETE SILOS. PERCIVAL M. FRASER, F.R.I.B.A., ARCHITECT.

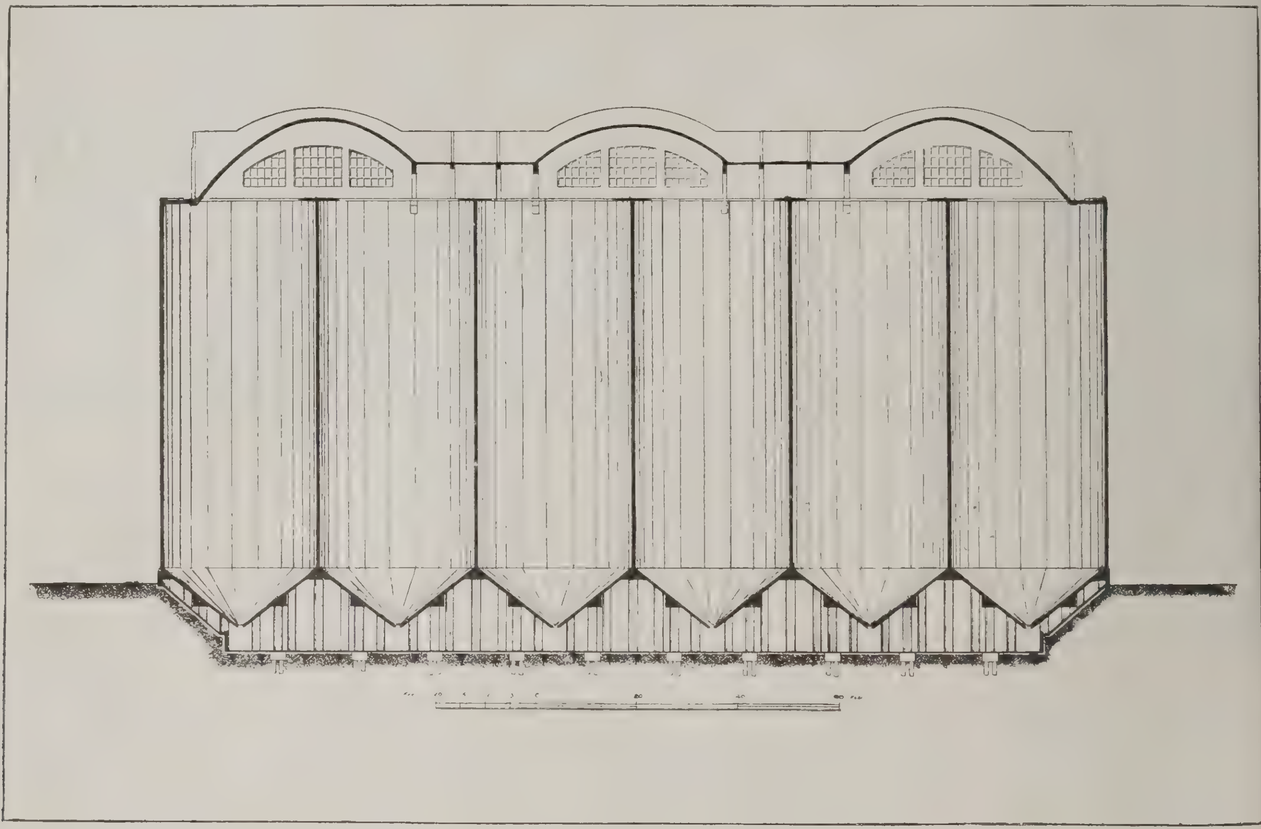
height to belt conveyers used throughout the buildings.

The warehouse building covers an area of 200 ft. by 400 ft., and consists of two halls, each spanning about 100 ft. A reinforced concrete transporter bridge with a tunnel below, runs through the centre of each building, the transporter bridges being extended outside the building against the river-jetty.

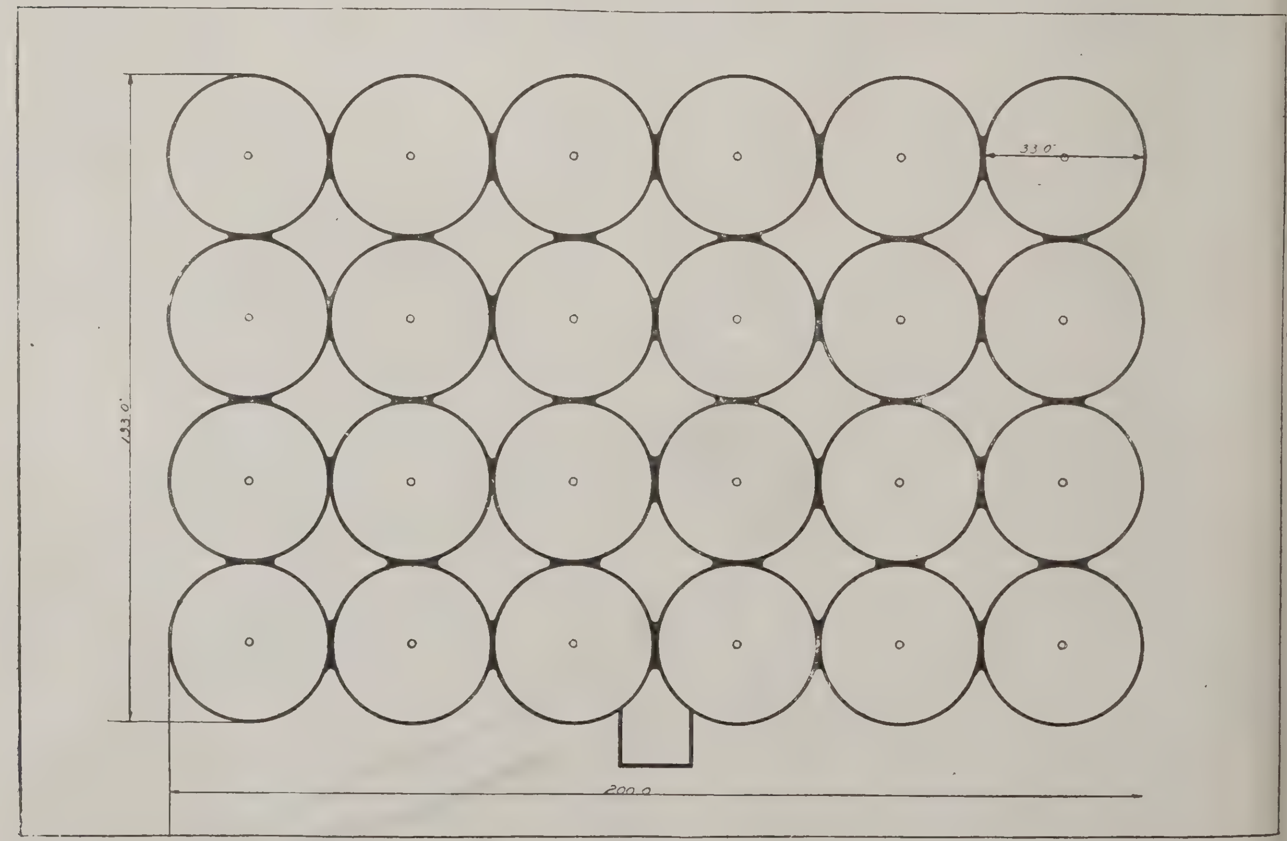
Fig. 7 gives an inside view of one of the halls, and Fig. 6 a view of the gables with one of the transporter bridges outside the building under erection.

Fig. 8 shows the temporary support to one of the bays under erection.

The architect for the building wa Percival M. Fraser, F.R.I.B.A. London, W.C. The whole of the forced concrete work was designe carried out by Messrs. Christiani Nielsen, of 25, Victoria Street, minster, S.W.1, who are to be con lated on a most successful achievem



Section of Silos.



Plan of Silos.

FIGS. 2 AND 3.—REINFORCED CONCRETE SILOS. PERCIVAL M. FRASER, F.R.I.B.A., ARCHITECT.

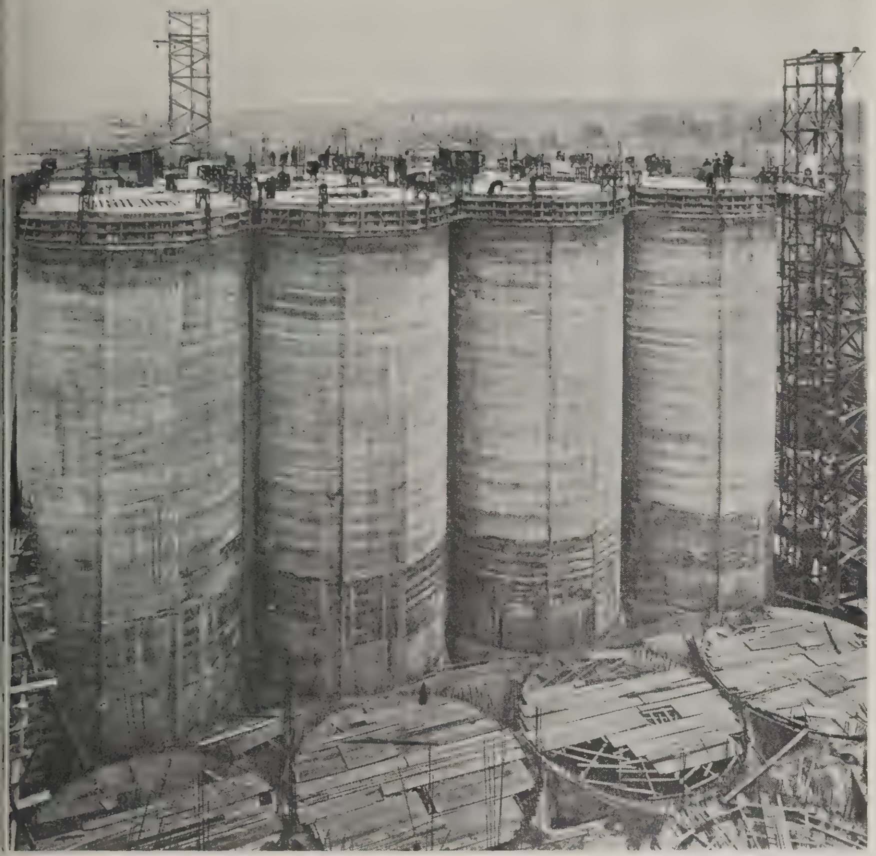


FIG. 4.—REINFORCED CONCRETE SILOS IN COURSE OF ERECTION.

ER THE WAR PROBLEMS OF RECONSTRUCTION.

n interesting series of meetings has
held at the Institute of the Hamp-
d Garden Suburb to discuss various
s connected with problems that will
in connection with reconstruction
the war. The meetings were
nged by a committee, of which Mrs.
ett is president, with a view of getting
n to the bed-rock questions of the new
hat is dawning by frank discussion of
great problems of reconstruction—
al, economic, educational, and inter-
onal—upon a distinctly ethical and
ious basis.

he opening address was given by the
of Crewe, and there were good
dances at all the gatherings.

The Crafts and Modern Life.

n Bank Holiday Mr. H. Wilson
ed the Arts and Crafts Section of
Hampstead Conference with an
ess on "The Crafts and Modern
," in the course of which he referred
e misconceptions which prevail as to
aims of craftsmen and the revival of
smanship. He denied the suggestion
ften made that craftsmen were only
to make things which were costly, or
the tendency on their part was to hold
f from modern life. The craftsmen
ted to see the people of the country
ided with better cups and saucers and
er doors and chairs equally with well-
ned and beautiful cities. So far from
ing to hold aloof from modern things,
artist was to assist the industry of the
try; but experience had shown that
lish manufacturers were not prepared
ay an adequate price for work done.
as this question of cheapness which
ld have to be faced. Politicians and others were now considering the question of reconstruction, and their ideas seemed to run on the lines of an intensified factory system—an extension of the system which had produced so many of the evils of the present day. It was for the craftsmen to push forward a better ideal, and they looked forward to the teaching of craftsmanship in the schools which would increase the number of independent craftsmen. In the new England, which they hoped would arise after the war, it was their hope to see craftsmen settled in villages and to find their products distributed by a co-operative system.

Town Planning at the Close of the War.

On the following day Mr. Henry R. Aldridge delivered an address on "Town Planning at the Close of the War." Premising that the subject was one of national importance, he said that 200,000 new cottages would be required in the first year of peace, 50,000 of which would be wanted for dwellers in the rural districts. The problem was complicated by the fact that out of 900,000 men employed in the building trade two-thirds were either in the Army or doing Army work; and there would also be the difficulty of getting sufficient building materials. There was also the fact that the cost of building material had increased by 70 per cent., and he reckoned that the rent of cottages would be increased by about 4s. a week above the pre-war period. The working classes would want proportionately increased wages in order to pay the increased rents, and, in his view, the higher wages would repay the employer in the long run.

Tradition and Modern Art.

On August 8, in the Arts and Crafts Section of the Conference, papers were contributed by Mr. George Clausen, R.A., Mr. R. A. Voysey, and Mr. Halsey Ricardo, F.R.I.B.A., on the subject of "Tradition in its Bearing on Modern Art." The first speaker dealt with tradition as applied to painting, and he expressed the opinion that while painting should be based on the sound traditions of the past, it should not be so much a slave to it as to hinder its development or debar itself from the full expression of modern thought. He pleaded that painting should be put to use and not allowed to be merely ornamental, and expressed the hope that some of the great doings of the present times might be painted and handed down to posterity.

Mr. Halsey Ricardo, dealing with the

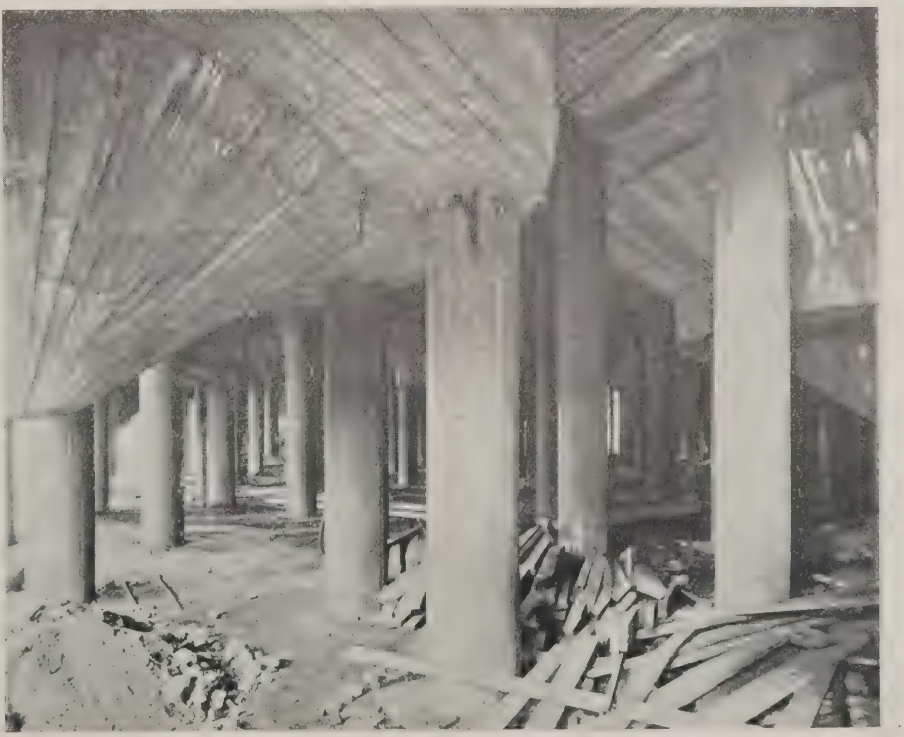


FIG. 5.—SILO OUTLETS WITH SUPPORTING COLUMNS.

scientific side of the subject, said that tradition was communal and not individual. Its scope and form was enlarged and modified by individuals, and the guilds and trade unions protected its growth from commercial abuse. Its growth was accentuated and accelerated by the spirit of adventure and the passion for science that had always influenced the craftsman. The triumphs of Roman architecture were due to the workmen experimenting incessantly, and when the Roman legions returned from foreign service they brought back with them their experiences of buildings they had to raise, with strange outlandish materials, during the slack times when they were in winter quarters.

Rural Housing.

Mr. Ernest Betham, secretary of the Rural Housing Association, delivered an address on the above subject on August 9, Mr. C. Harrison Townsend, F.R.I.B.A., presiding.

Mr. Betham remarked that, in his view, our future as a nation largely depended upon the sagacious settlement of the question of providing houses for agricultural workers. Any State housing scheme must strictly reserve the cottages to be provided for the agricultural worker, for if they were thrown open to all sorts of tenants the former would be left in the lurch. The people to be housed were the alerter men and women who were now on the land or who could be induced to take up an agricultural life. It would be necessary to have at least two classes of cottages, which should be built on sufficient land and let at moderate rentals, with powers on the part of the tenants to purchase the freehold.

The crux of the whole thing, if it was to be a success, lay in the management, and the ideal scheme was that proposed in the addendum of the minority report of the Housing Committee, by which the whole country would be covered by local boards, containing representatives of the county and district councils, and private citizens chosen for their interest in the matter, to which later on could be added representatives of the tenants and labour.

Art Schools and Craft Workshops.

On August 10 Professor Selwyn Image, M.A., and Mr. Thomas Okey delivered addresses on the above subject.

Professor Image, who spoke chiefly on Art Schools, remarked that they existed for a two-fold object—first, for the training of professional artists and craftsmen, and, secondly, for the training of artistic appreciation in the community. With the latter object in view, he would have their schools of art encourage the attendance of amateurs, who pledged themselves to submit to discipline. Amateurs should not be taught something in a showy fashion about the arts generally, but something about the practice of at least one art in a fashion genuinely workmanlike. In so far as art schools existed for the training of professional artists, Professor Image said that the nearer their modern system could in its spirit and methods approach the old system of master and apprentice the better.

Mr. Okey advocated developing properly equipped craft workshops for the education of the worker. The problem, he said, must be approached in a big way and the country must be prepared to spend at least as much in a year on reconstruction as it was now spending in a week on destruction.

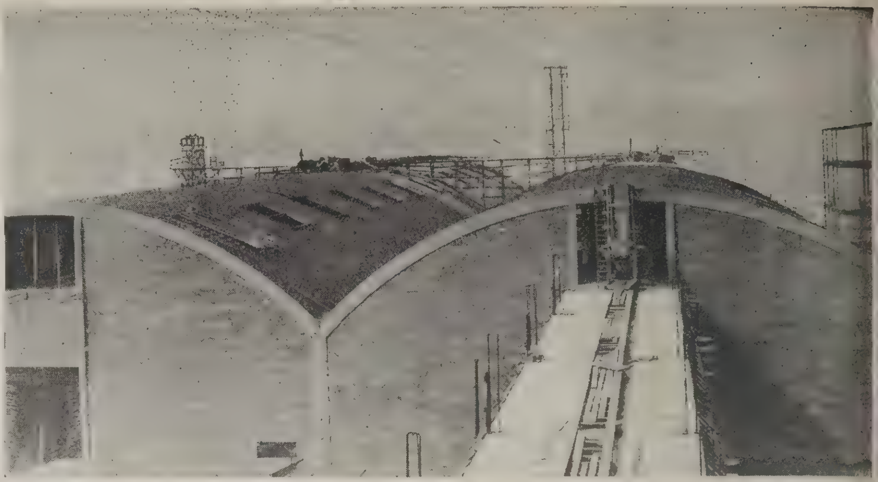


FIG. 6.—GABLE-ENDS OF WAREHOUSES.

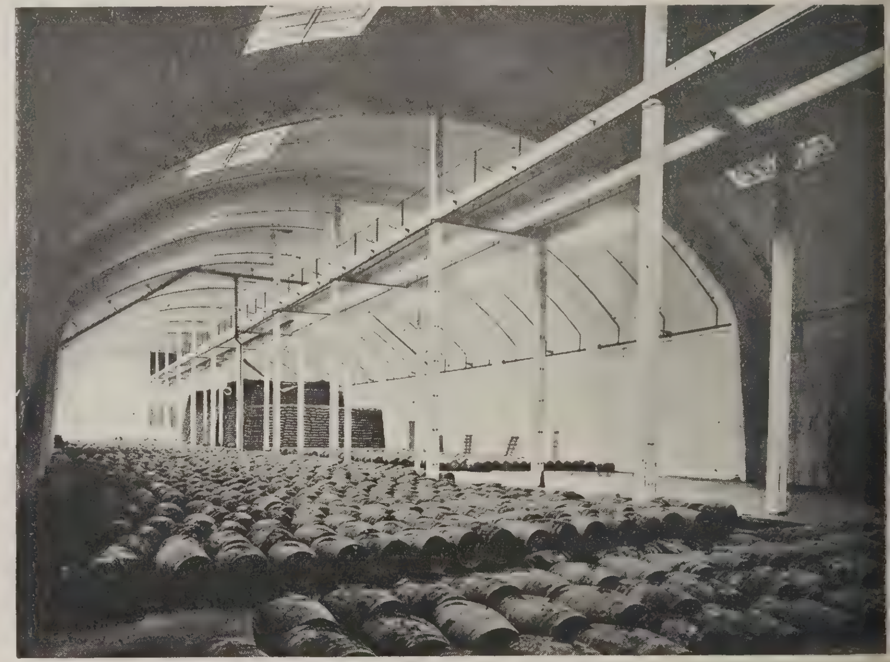


FIG. 7.—INTERIOR OF ONE OF THE WAREHOUSE HALLS.

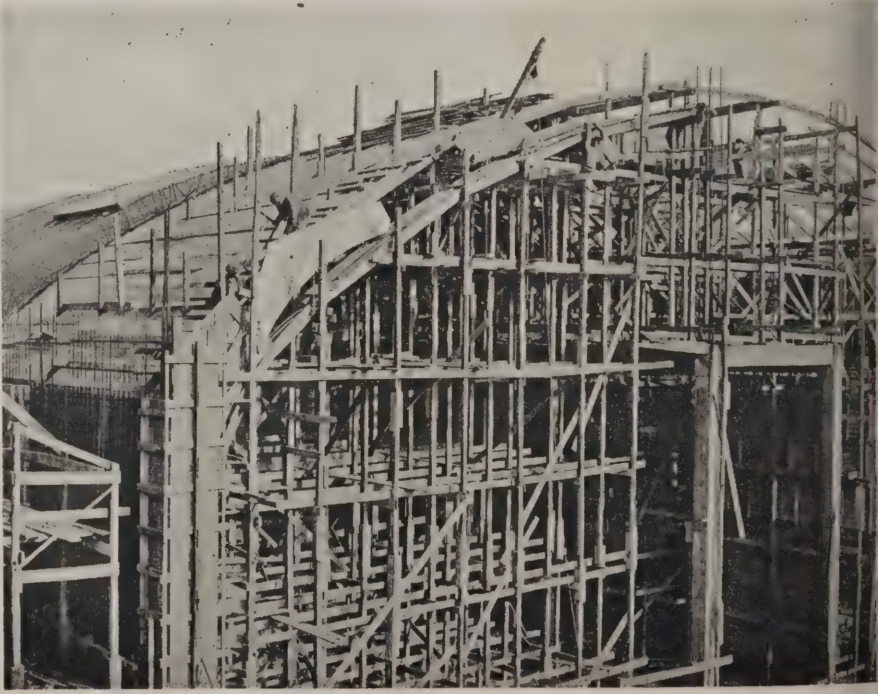
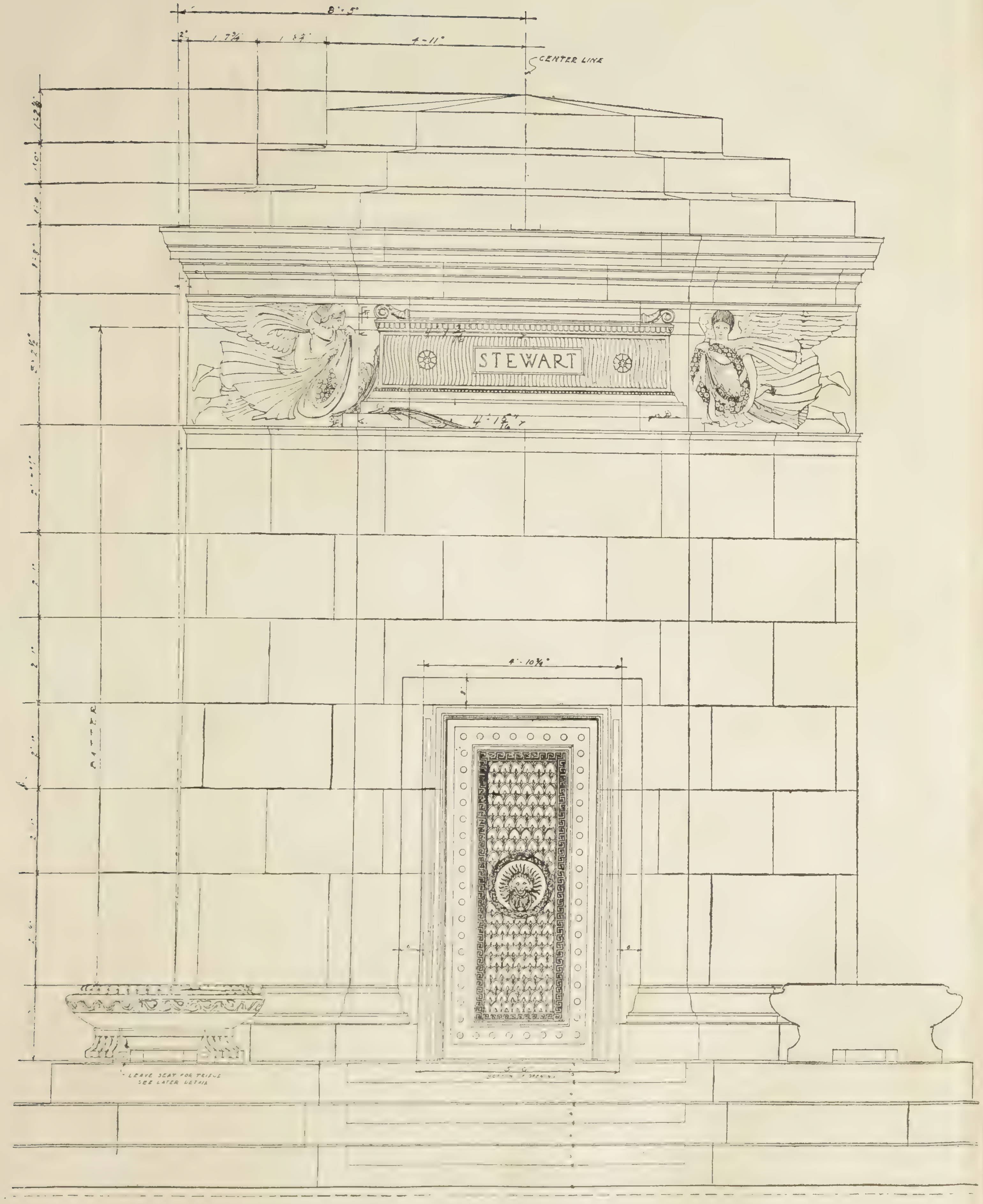
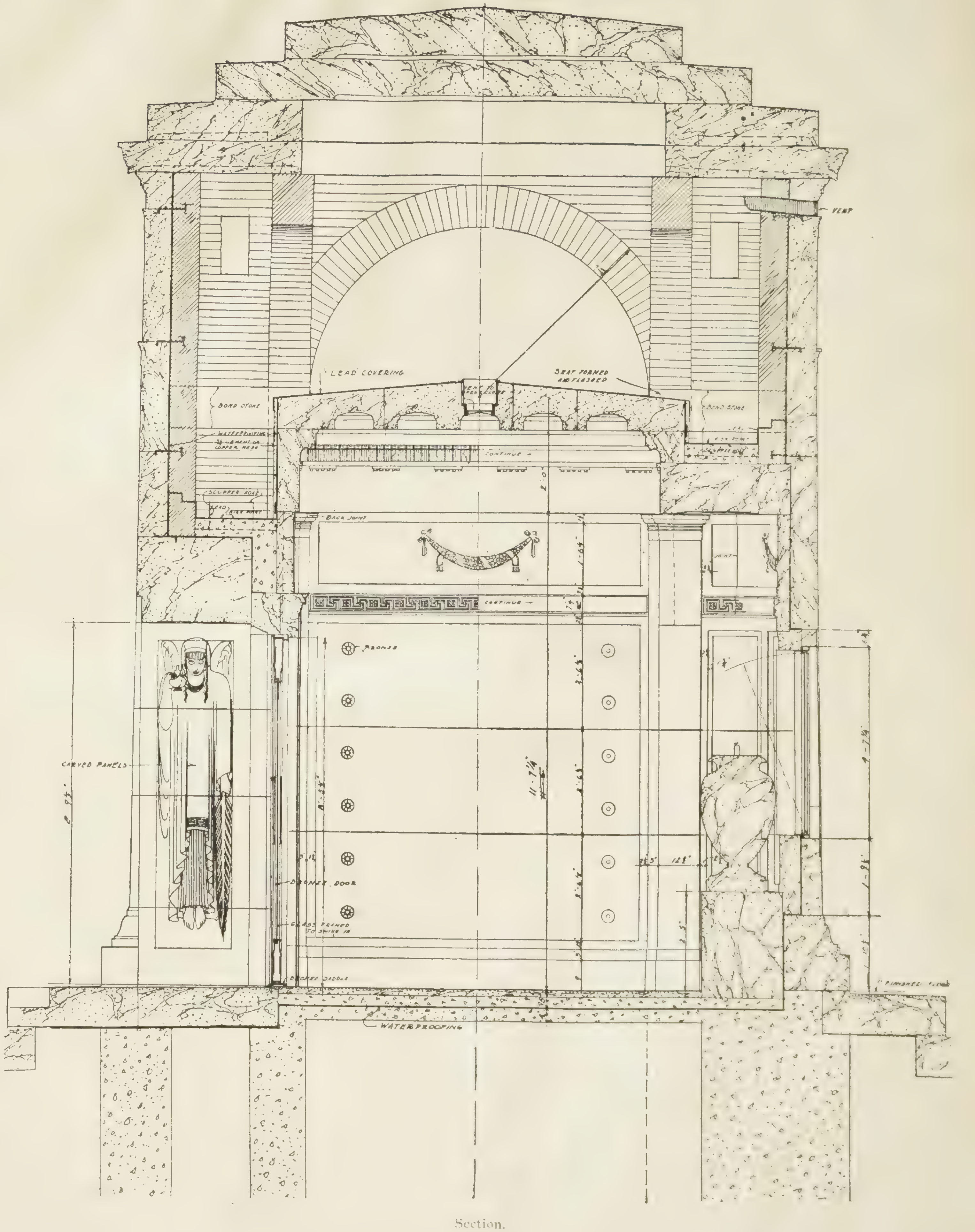


FIG. 8.—WAREHOUSE IN COURSE OF ERECTION.



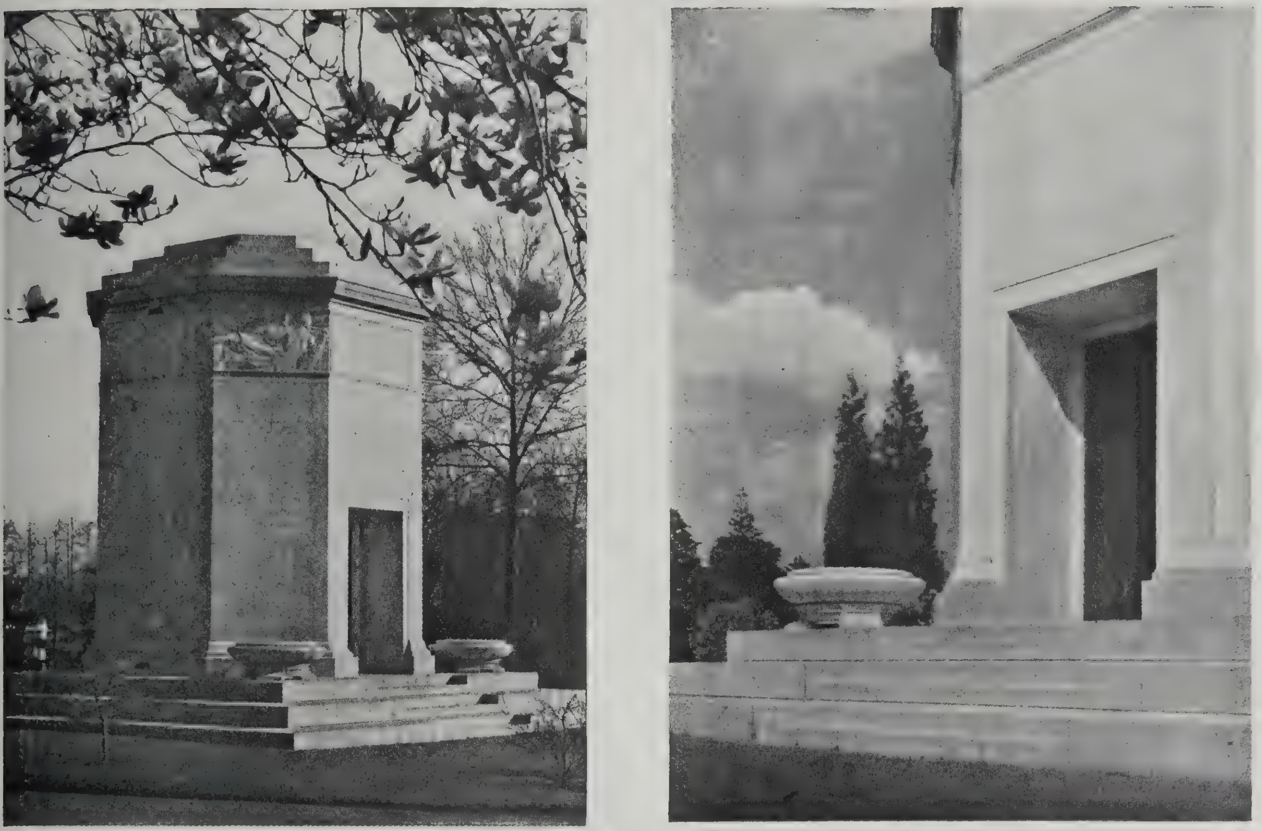
Principal Elevation.

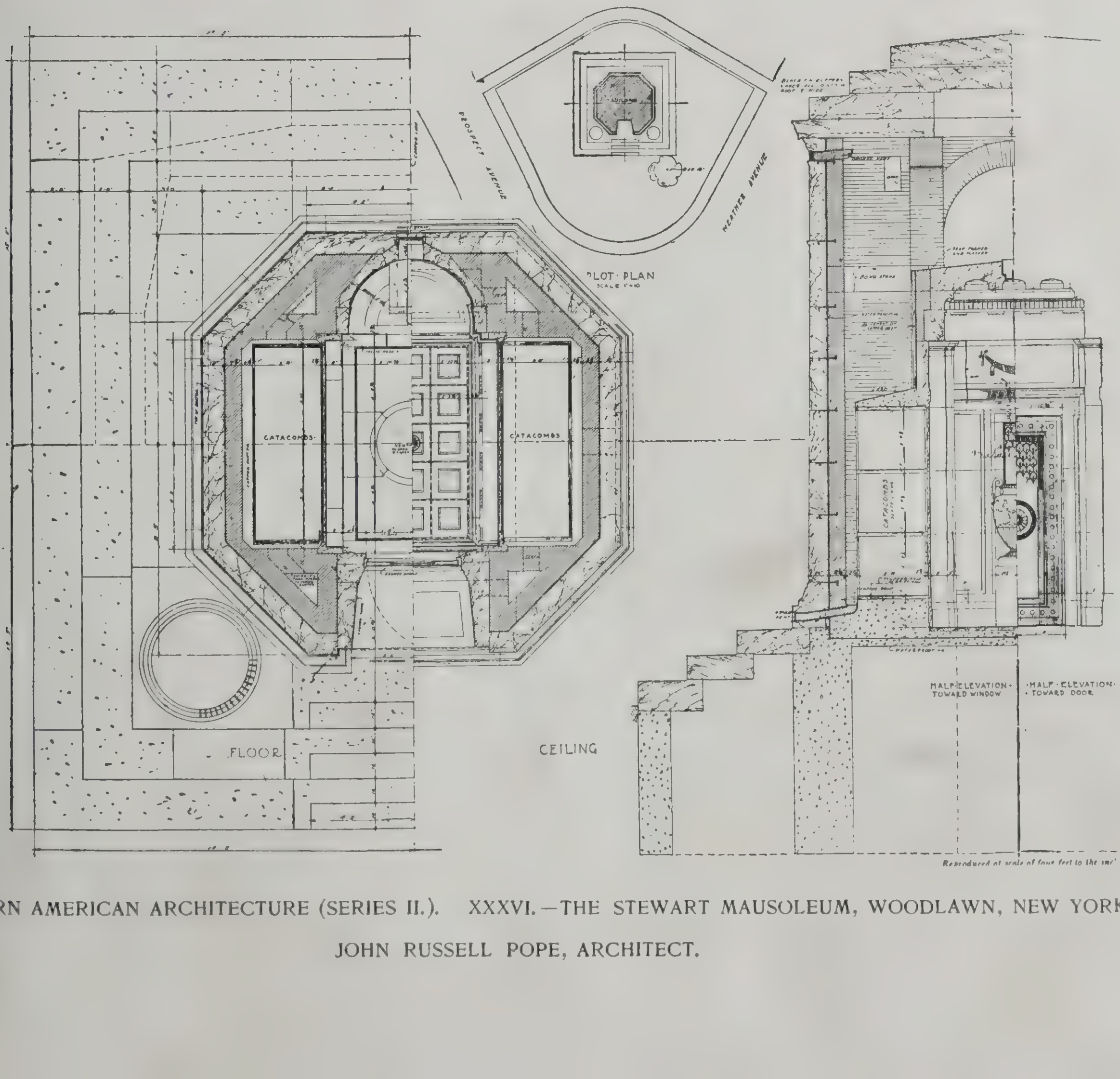


Section.

ARCHITECTS' WORKING DRAWINGS (SERIES II.). XLVII.—THE STEWART MAUSOLEUM, WOODLAWN, NEW YORK CITY.

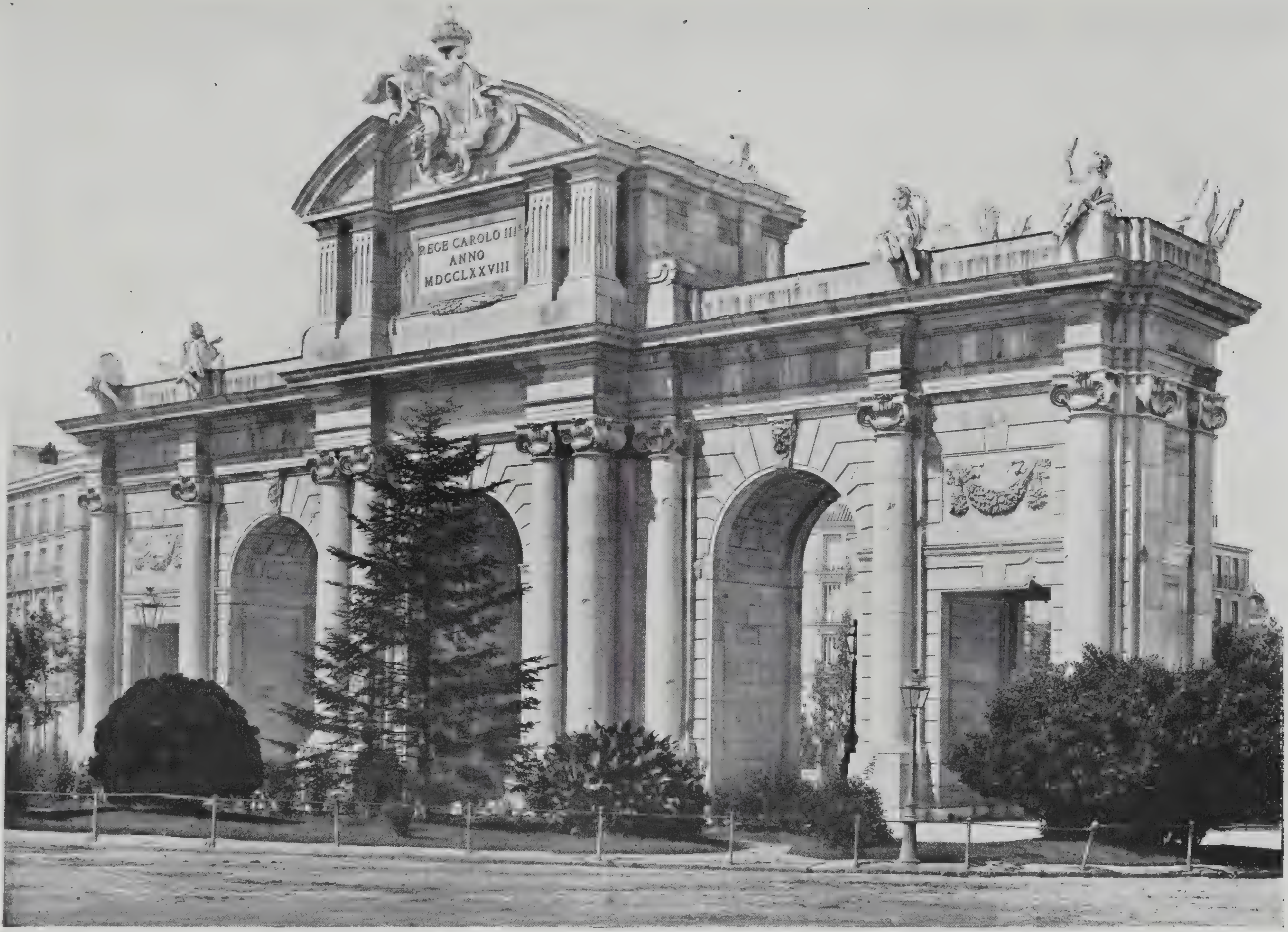
JOHN RUSSELL POPE, ARCHITECT.



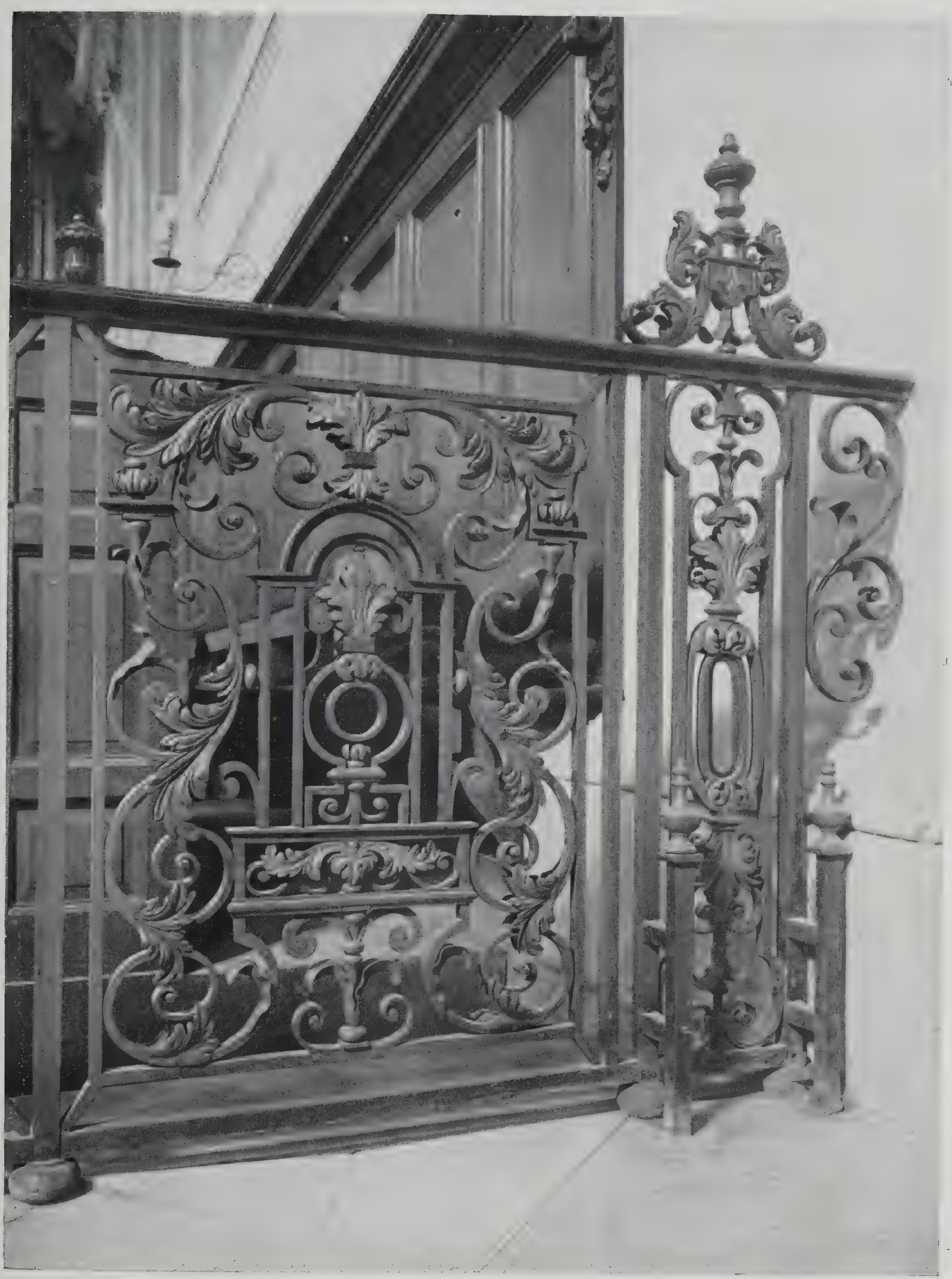

PROSPECT AVENUE
HEATHER AVENUE
PLOT · PLAN
CATACOMBS
CATACOMBS
FLOOR
CEILING
CATACOMBS
HALF ELEVATION · TOWARD WINDOW
· HALF · ELEVATION · TOWARD DOOR
Reproduced at scale of four feet to the inch

MODERN AMERICAN ARCHITECTURE (SERIES II.). XXXVI.—THE STEWART MAUSOLEUM, WOODLAWN, NEW YORK CITY.

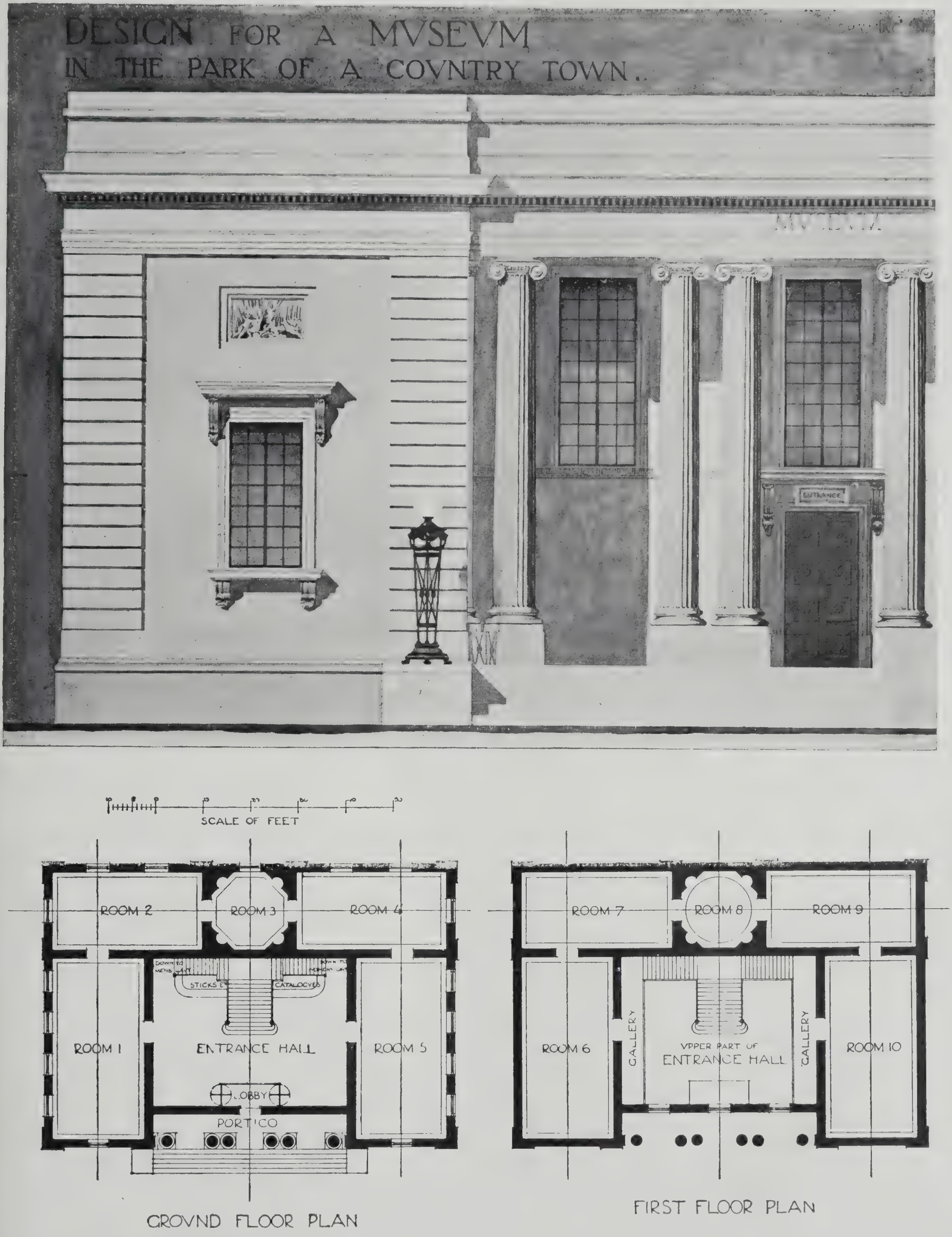
JOHN RUSSELL POPE, ARCHITECT.



MONUMENTAL ARCHITECTURE (SERIES II.). XXI.—PORTE D'ALCALA, MADRID.



DETAILS OF CRAFTSMANSHIP (SERIES II.). XXXV.—DETAIL OF WROUGHT-IRON ALTAR RAIL IN QUEEN'S COLLEGE CHAPEL, OXFORD.



STUDENTS' DRAWINGS (SERIES III.). V.—DESIGN FOR A MUSEUM IN THE PARK OF A COUNTRY TOWN.

BY CYRIL CHEEK.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

AUGUST 29, 1917. *TOTHILL STREET, WESTMINSTER.* VOLUME 46. No. 1182.

R. H. A. L. FISHER'S aspiration for an English
university as a national war memorial ought to
materialise. What exactly his idea is he has
to conjecture: and a national university is without
t precedent. Its form and its functions are there-
alike nebulous, but what a magnificent building
dea conjures up in the mind's eye of the architect.
ould outvie the grandest buildings of Greece and
e, because it would commemorate a greater occa-
than any that is recorded in ancient history, and
d mark also the resolve of this great nation to
about the unity which is as essential to the
ries of peace as it is to those of war. Cer-
y it must be a noble building—so much may
ken for granted; but before it can be designed the
tect must have some conception of the work it will
Probably the Minister of Education himself has
shadowy idea if what duties will devolve upon it.
supposes that it will not be a working university—
eal descendant, through Oxford and Cambridge,
aris, Bologna, and Padua. These stand for the
-out mediæval traditions which the war will enable
discard utterly. Rather will it be a clearing-
—we purposely introduce this essentially modern
ssion—for national education. All the older
rsities, if they are to survive the coming
cence, must burn their ancient idols and conform
ason and utility. They must not be allowed to
nue to waste more bright young lives than the
as robbed us of. They must cease to occupy
selves with dead languages and effete philo-
es, and must be made to justify their existence by
ibuting substantially to the development of
rn forces. They must admit science and art to
rightful places—must assist intellectual evolution
d of retarding and stultifying it. In short, they
respect the dignity of business, and ensue it.

* * * *

this central clearing-house for education there
be no actual teaching. Its business will be the
ation of teaching, the organisation and co-ordina-
f studies. It shall be the seat of the Ministry of
ation, and of an Educational Parliament at which
erests shall be represented. Universities, public
econdary schools, technical schools, elementary
ls, and even "correspondence colleges," shall
bute to it their experiences and turn to it for
in their difficulties. It shall gather from all
s and shall digest all educational information,
all call together conferences in various towns at
and abroad, in the manner of the meetings of the
Society. It shall have the power to endow
ch and to help poor students of rich promise. It
a kind of permanent Œcumenical Council for
tion, and surely its home shall be built in what
ew Arnold called "the grand manner." It will
sly break away from all obsolete practices, and
mit, for example, that a competent knowledge of
reek methods of building is at least as good a
a degree as the ability to construct dubiously
ic iambics. It will, in effect, give us a much-
revision of values in education. Wanting such
ing-house, we shall go on producing minimum
at maximum expense. We must set our house
r because we can no longer afford to play the
earted, reckless spendthrift.

* * * *

ously enough, before the ink of the foregoing
aph was dry, the writer lighted by accident on a summary by Mr. G. W. E. Russell of almost identical views expressed by Matthew Arnold nearly fifty years ago. At the apex of the pyramid, said Arnold, there should be a Minister of Education. In our scheme of education, there was a task "of co-ordering things"—of "making them work fitly together to a fit end"; and Arnold deplored a waste of power, therefore extravagance, and therefore poverty of result. The Minister of Education, 'comprising, without regard to politics, of the country." The universities, the public schools, the middle-class schools, and the elementary schools, were all to be, in greater or less degree, subject to his sway. The Minister was to be assisted by a Council of Education, 'comprising, without regard to politics, the personages most proper to be heard on questions of public education.'" Anomalous institutions were to be co-ordinated to the existing universities, and the universities were to establish faculties in great centres of population, supply professors and lecturers, and then examine and confer degrees. Anyone who cares to pursue this subject further should consult first Mr. Russell's monograph on Matthew Arnold (Hodder and Stoughton), and then Arnold's masterly reports in the Board of Education Blue Books. As the R.I.B.A., the A.A., and other architectural schools are profoundly and vitally interested in this subject, this reference to Arnold will no doubt be useful.

* * * *

It is stated that the removal of the gilded iron grille in front of the Ladies' Gallery in the House of Commons was to cost no more than £5. Nevertheless, the work was doubtless done with extreme care, and without detriment either to the grille itself or to the fabric to which it was fixed. It is worth very much more than its value as scrap-iron, and should be preserved in the London Museum as a relic of the barbarous times when woman was regarded from a mediæval point of view; it was suggested sub-consciously, perhaps, by the mediæval style of the building. Although it was got down without damage, it will show traces of the injury inflicted upon it when, in 1908, Suffragettes chained themselves to it, padlocked the chains, and threw away the keys, when portions of the grille had to be sawn away. In the Ladies' Gallery there is accommodation for only about thirty-six persons. There need arise no question of enlarging it; for, surely, in these spacious times, ladies will no longer be excluded from the Strangers' and Speaker's Galleries, but perhaps the Ladies' Gallery will be reserved for women who prefer not to mingle with the men; in which case its capacity will be ample, if one may judge from the signs of the times.

* * * *

Wonderful reforms would ensue, according to a writer in the "Daily Mail," "If Women Built Houses." There would also be substantial improvement if architects built them. Mr. Sydney Tugwell, A.R.I.B.A., has called attention to this aspect of the case, which seems to have been hitherto overlooked by a public that is more apt to grumble at effects than to ascertain causes. He writes: "The public should bear in mind that the majority of houses are erected by speculative builders without architectural assistance other than that of a junior draughtsman (in his own time)," and the result is that "ill-planning, faulty construction, and the use of inferior materials, bring in due season their own crop of troubles" through "the lack of professional supervision," and because of "the public's desire for cheapness." Possibly the last phrase quoted is open to misconstruction by a mixed public, who will jump at the inference that "architectural assistance" is costly, whereas the truth is that the architect's fee on a small house is insignificant in comparison with the advantages secured. These advantages the profiteer whose sole object in building is to get the property off his hands at the earliest possible moment is very willing to forego. As he is in keen competition with other sellers, he is anxious to avoid doing anything that will send up the price by a five-pound note; for he knows that if A is selling houses at £325, B will have considerably more difficulty in selling at £330 houses that to the uninstructed eye present no difference but that of price.

* * * *

Apparently since the public always blames "the architect" for defects in planning and construction, it needs the information that Mr. Tugwell has opportunely supplied—that in ninety-nine instances out of a hundred no architect has had anything whatever to do with the matter. Even the "junior draughtsman" is dispensed with, unless that designation may be stretched to include the young carpenter or bricklayer who has learnt a little drawing at an evening school. It is quite clear that the public is extremely ignorant of the functions and the standing of the architect. It does not know that the architect is normally appointed not merely to design the building, but to prescribe its materials and supervise its construction—to take every reasonable care that the building owner, whose agent he is, shall get the worth of his money. But in speculative building in which the temporary owner is also the builder, the architect would be placed in a very invidious position. He would have no control over materials and workmanship and could not even insist that his designs and specifications should be carried out.

* * * *

With respect to this matter of lady architects the public is densely ignorant, and on this point also Mr. Tugwell enlightens it. He states—what is perfectly true—that the R.I.B.A. several years ago admitted ladies to its examinations, and that only three or four have presented themselves. And, of course, architecture is not a close profession. Any lady who likes can call herself an architect, and nobody can say her nay; and it has been put to the proof that a chimney-sweep may advance the same proud claim and none dare make him afraid. "There is nothing," as "The Londoner" has said in one of his delightful gossips, "to keep a woman who is in the mood for architecture from buying a drawing-board, a T-square, a box of those delightful instruments, and setting up as an architect." But as we have seen, architects have little or nothing to do with the small domestic work which woman seems to claim as her special objective. If woman is constant in anything, it is in her perennial scorn of man-made houses. But the man-architect has an unassilable defence. In the first place, he does not plan these houses. If that is not enough, then we can fall back on the declaration of "The Londoner" that houses are built to the taste of woman; and what is that taste? "Let the architects but come for a walk with me along the shop windows: I can show them the boots and the hats made to the desire of this woman who says that the house—and the house is our uppermost garment—will be built to common sense if she have the building of it."

* * * *

In great houses and in small, the woman's influence is supreme. It is therefore right and meet that she should be educated in the matters in which her decision is final. Her pronouncements will then be more in accordance with knowledge, to which the tactful architect will be able to make a more successful appeal t
is possible where wilfulness and ignorance are in c
bination against him—the former being in direct r
to the latter. Not that anything can ever make
lady client reasonable; but while it will remain h
less to convince her, it will become more eas
persuade her that she is getting her own way when
mere male architect can say that architectural opi
has in it a strong element of feminism—that, ind
such and such arrangements were actually devise
his own lady assistants. All this may be largely of
nature of chaff: but there is grain in it for the sift
In all seriousness, we welcome the admission of la
to the A.A. schools. Quite apart from the ques
whether architecture offers a suitable career for la
we believe that their training in it would be a valu
addendum to their general education, and that thro
them would come that degree of public enlighten
that is necessary to the appreciation and promotio
good work. Public ignorance is a drag on the wh
Public intelligence would lubricate them. We t
therefore, that the ladies' department of the
schools will be perennially filled to over-flowing;
most of them will go there with the object of com
ing their education rather than of adopting the pro
sion; and that ninety-nine per cent. of those wh
adopt it will speedily contract happy marriages
forsake it.

* * * *

From a member of our staff who is taking a few d
rest at the seaside, whither, he declares, he has
"driven to take refuge from the plague of
whistles," which has now been stayed, we have rece
the following fantastically exaggerated comment
"At last the cab-whistling nuisance is stopped.
ought not to have been tolerated for a week. It w
brutal assault on the nerves, and should have
punishable with imprisonment without the option
fine and without benefit of clergy. At any mo
the writer or thinker was subject to the sudden in
ruption of his work and the total derangement o
ideas by the shrill shriek of the cab-whistle, whic
one soul-searching blast shattered the nerves
destroyed the peace of all the more sensitive of
lieges within a half-mile radius. It killed inva
frightened horses to bolting point, scared cats o
their nine lives, and brought well-bred dogs to a
of noisy blasphemy. It emptied houses and red
rental values. It murdered art, including architect
and whenever you come across a particularly bad b
design, be very sure that the cab-whistle was the
cause of it; for not only did this instrument of to
interrupt work—it embittered existence, curdled
milk of human kindness, warped genius to abo
issues, sapped morality, and was the real *fons et o*
of Labour Unrest. A solo on the cab-whistle, de
enough in its actual incidence, was even more le
by the irregularity of its intervals. Carlyle was n
more irrefragable than when he told the magist
that what destroyed him was not so much the ac
cockcrowing, as the agony of suspense between
spasms. So it was with the cab-whistle. Worse
the actual onslaught was the dread of the next o
which might smite you at any moment, disturbing
delicate poise between blue tiles and green for
bathroom, shattering with its harsh disco
scream your harmonious conception in such
that you never can recapture that first
rapture, cracking slates, preventing the ir
set in cement, splitting the Cabinet, dri
away in anger and fright the rich client
was just at the point of agreement. But it has g
thanks to the merciful intervention of 'D.O.R
within whose province the strident and demorali
cab-whistle certainly fell, and to whom I take off
hat and make my best bow; so now, surely, we
within measurable distance of an honourable peac

HERE AND THERE.

IME, space, motion—how little we know about them! And yet they summarise the primal conditions of existence. Time and space baffle ception, and motion, though more tangible, is lly less obscure as to its essence. We move in time space, and Mr. Frank B. Gilbreth has demon- ted that in the building business we do it very conomically. He shows, as the result of intensive y of motion, how to get a brick in the quickest time, ugh the shortest space, and with the least amount novement, to its appointed place in the wall. He made wonderful records of rapid construction, and nterprising editor sought him out to inquire how lid it. Mr. Gilbreth had discovered how the usual iber of motions in laying a brick "could be cut n, by having the brick brought to the bricklayer in fferent way than usual, by placing them in a some- t more convenient position, by arranging the folding in an improved manner, and by various r little changes, some of them slight in themselves, all together totalling an immense saving in time motions." The rest is detail.

* * * *

hat a bricklayer is not invariably economical in ighest degree in moving in time through space the wing extreme case will show. I remember er vividly watching with awe a man who, having his bricks and his mortar-board dumped about six ls away from the nearest end of the wall he was ding, was confronted with a rather serious transit lem. *Solvitur ambulando.* He spent half a ning in perambulating the distance to and fro e for every brick he laid. First he would walk h leisurely (and the leisureliness was born of fore- t, or perhaps of previous experience—he knew "fair and softly goes far in a day")—anyhow, he ld walk forth stately and circumspect towards the tar, take on his trowel enough to lay one single k, march back to his base with even less impetu- , spread the mortar without visible indication of ssive hurry, and then, after a careful survey of the ad, march back to fetch a solitary brick, with h he returned even more slowly, perhaps because as carrying more weight. No doubt his primary ct was bricklaying; but his main achievement, titatively, was pedestrian exercise. If this had mentioned to him, his repartee would probably been a claim for "walking time." He could not been a loyal trade-unionist, for was not all this ing and carrying mere labourer's work? Anyhow, as "exceedingly pitiful," whether it was done lly or ignorantly; and it was merely an exagge- l instance of the wrong way of doing things.

* * * *

r. Gilbreth refines on the movements of the best ers who have not studied his system, and can lly cut out about two-thirds of them, with a cor- onding gain in speed and in conservation of gy. He has studied the matter most thoroughly. does not begin with the operations of bricklaying. begins with the anatomy, the physique, the hology or temperament, the creed even, of the who lays the bricks. Each of these variables be taken into consideration when you are ging a gang for a very quick job. Creed comes in use if you can get together a band of men uniform eed, they will work together more harmoniously sympathetically than men who represent a miscel- ous assortment of antagonistic or antipathetic ls. The scaffold-platform is too narrow for a exchange of opposing religious views; and an ment conducted with brickbats would represent a rably uneconomic use of time, space, and motion.

Nor is this all. "The motions of a bricklayer working upon the walls of a church differing from his own religion are often vastly different from those that he is careful to make when the congregation to occupy it coincides with his belief." That accounts for the soullessness of modern Gothic, and for the failure of the London strikers to combine successfully for the completion of the Theosophist church. It may also explain the fervour with which the parson and his churchwardens roll up their sleeves and put more piety than plumbness into the walls of the parish hall. And your steeplejack should always be a High Churchman. A really scientific builder's manager, in selecting his labour squads, may be expected to draw up the recruits in line, and, in telling them off, to address them in the time-honoured formula of the army drill-sergeant before church parade—"Church of England two paces forward, Roman Catholics two paces to the rear, fancy religions fall out." They had better fall out before reaching the job. I could indicate several buildings that exhibit a pronounced lack of sympathy which would have been quite inexplicable upon any other hypothesis than that advanced by Mr. Gilbreth. Certain façades show details that demonstrate the extreme virulence of the religious antagonism that must have divided their builders; and the "buildings that swear at you as you pass" must have been thrown together by rank atheists. Even without resorting to this nice adjustment of creed to construction, we shall in the near future get much sweeter buildings, when the Builders' Parliament has succeeded in winning the workers' "affection" for his employer. Schools, of course, will always be built by Bachelors of Bricklaying, wearing their mortar-boards, and imparting an educational touch to every flourish of the trowel.

* * * *

"Athletic contests" are to be arranged, and in these the men's "variables" may be turned to positive advantage. "Example.—On engine-beds and similar work, where the pieces are isolated, assigning gangs of men of different nationalities to the different beds will create extra interest in the contests. If this is not feasible, put the tall men on one bed and the short men on the other, or the single men against the married men, or eastern 'pick-and-dip' men against western 'string-mortar' men." What about smokers v. non-smokers, teetotalers v. others, under 30 v. over 30? But personally I never cared very much for these scratch matches. They always struck me as being magnificent, but not cricket. Give me the opposition of counties, with Kent, Surrey, and Yorkshire well in for the championship.

* * * *

Mr. Gilbreth's survey, comprehensive as it is, makes an unaccountable omission. Where is the inspiriting music? It has been demonstrated that men work most briskly to lively music. Of course the band would be most aptly chosen—brass for a big bank building, string when the stringcourse was being moulded, fifes when the flutings were being cut, a rich mix for reinforced-concrete work, the musicians in this case being cautioned against omitting any of the bars. For a small building the expense of a band need not be incurred: a gramophone would suffice to induce quick motions, while the erection of small property would be sufficiently accelerated by the inspiriting strains of a mouth-organ. Mr. Gilbreth's omission to notice the valuable psychological effects of music is the more strange since we remember to have read somewhere that the small armies of draughtsmen employed in American architects' offices have been inspired to almost frenzied speed through the agency of an ocarina. But perhaps he remembers the disastrous experiment of the brothers Adam in this kind. They imported a band of Caledonian pipers to speed up the Adelphi workers, who (being themselves Scotsmen, mark you), at the first skirl downed tools and pursued with murderous intent the unfortunate pipers, who fleeing for their lives, some down Fleet Street and some up the Strand, have nevermore been seen or heard from that day to this. But their descendants have made good on the fields of Flanders and elsewhere. And I think that Mr. Gilbreth makes good, in spite of his having fallen into the very natural tendency of the enthusiast to run to excess. He has discovered and described the very best way of economising movement in all the operations of building.

DIOGENES.

ARCHITECTURAL IDEAS IN WAR-TIME.

IN these dark days of war, with private practices stagnant, and the bulk of our young men in the Army or engaged upon some other form of war work, it is inevitable that architecture should appear to be somewhat neglected. But the neglect is more apparent than real; for we may assume with perfect confidence that where the seed of architecture has taken root there it will continue to flourish, no matter how adverse passing circumstances may be.

Though cut off from all old ties and associations, from books, T-square, callipers, and all that formed the means of architecture before the war, the architect, be he on service at home, in the shell-riddled morasses of Flanders, or in the stifling heat of desert trenches in Egypt or Mesopotamia, will find that his interest in architecture never wanes if he has any real enthusiasm for his art. In one sense, indeed, his isolation is an advantage, for it stimulates the imagination, which is free to soar where it will, unhampered by any of the obstacles of ordinary life. What brilliant schemes, what magnificent ideas, may be germinating in the minds of architects on war service—to be put to the test on the resumption of architectural practice at the end of the war.

That there is a sound basis for the supposition that architecture occupies a foremost place in the minds of architects who for the time being are following the military walk of life, and that much may be expected from their meditations, is apparent from the following extracts from a letter which we have received from an eminent architect, who desires to remain anonymous:—

"It is with much pleasure I receive each week your valuable paper with the other architectural journals which I have sent me; and because of the high merit of text and illustrations I would like to make the following suggestion: Would it not be possible to have occasionally, in place, perhaps, of the plates you give to reproductions of old work, a sheet to illustrate modern architectural thought? By that I mean sketch designs, monumental in character, expressing ideas passing in the minds of the architectural student in his thoughtful moments during this extraordinary period.

"I feel that there is so much illustration of old work and not enough of present-day ideas; what is illustrated of modern work is seldom monumental, and mostly expresses the best the architect can do with impossible conditions.

"Unless this illustration of the past can inspire the architect to-day with ideas to express what is within *him*, then it does not, I think, promote advancement. It would be a good time now to test its value. There are many men like myself who have given up practice for the time, but find it impossible to give up thinking of architecture. In the midst of military duties there is always some part of the day when there is leisure time, and it is a pleasant change to go back to it. With a pen and some foolscap paper, which the Army
possesses in abundance, ideas can be easily n
down, and these should be interesting and valu
if our training has meant anything to us.

"I am quite sure that such a contribution woul
appreciated each week by your readers, many of wh
like myself, would enjoy looking forward to mee
with some fresh thought or expression. Although
contribution could only be sketches, yet these woul
doubt possess interest peculiar to the conditions u
which they were produced, away from all books
the usual architect's surroundings. The mind w
be unhampered and fresh with ideas, based upon v
was stored within the memory.

"I have found it a relief and a joy to allow the n
to wander into the realms of architectural dreams a
from the sordid influence of a client's purse, an
forget for a while the horrors of the present struggl

"I believe, in the interest of our future architect
it is important that the younger men should
encouraged to continue the exercise of their desig
faculty."

Our correspondent has kindly supplied us wit
series of drawings illustrating some of the ideas
have passed through his mind · the first exampl
given in this issue, and others will follow week by w
They are, we think, brilliant examples both of de
and draughtsmanship. and should prove of more t
ordinary interest to our readers. It is our idea
this feature, which ought to be extremely valuable
record of architectural thought during the grea
crisis in all history, should go on indefinitely:
readers, particularly those on military service,
invited to co-operate in making it a success by sen
in drawings or sketches—no matter how rough
unfinished—of their own architectural visions in t
tremendous days. All drawings submitted will rec
careful consideration.

THE PLATES.

Ideas by an Architect on War Service.

THIS drawing is the first of a new series of pl
the purpose of which is to reveal the ideas
pass through the minds of architects in war-t
The author of this brilliant piece of architect
draughtsmanship is an eminent architect, who wi
to remain anonymous. A general outline of the s
of this new feature is given in the article on "Arch
tural Ideas in War-Time," which appears on this p

Details from Ashburnham House, Westminste

It is uncertain whether Inigo Jones or John W
was responsible for the design of Ashburnham H
claims having been advanced in favour of both, th
without the production, in either case, of corrobora
documentary evidence. The house is a sple
example of its period and contains some fine int
decorative detail, examples of which are illustrate
one of the plates in this issue.

Mortuary Chapel, West View Cemetery,
Pittsburgh, Pa.

This building possesses an architectural dig
which has been secured with little apparent effort.
arch *motif* dominates the whole composition, but t
is no effect of monotony. The texture of the
surface is attractive, and a certain relief in the b
work is provided by a deep band of "headers."

The Column of Congress, Brussels.

This column was erected during the reign of
Leopold II., the bronze statue which surmounts
capital being of the monarch himself, by Geefs.

The Fontaine St. Michel, Paris.

Davioud, who was architect to Napoleon III., ca
out many important works in Paris. Chief an

m is the Fontaine St. Michel, illustrated on the ble-page plate in this issue. In this work the archi- t would seem to have been inspired by the Molière untain, but his treatment is on a far larger scale, and rs the stamp of his own individuality. The princi- l *motif* comprises a bronze group of St. Michel and Dragon, by Duret, set on a rock within a high he, from which a cascade falls into tiers of basins, ile griffins on either side spout jets of water. lumns of red marble bearing bronze statues of idence (by Barré), Strength (by Eugène Guil- me), Justice (by Robert), and Temperance (by mery), flank the central feature, and above is a very king pedimental treatment.

CORRESPONDENCE.

The Housing Question in England and Wales.

Ne are requested to publish the following corre- ndence which has passed between Mr. Mark H. lge and the President of the Local Government ard:—

the Right Hon. H. W. Hayes Fisher, M.P.,
President of the Local Government Board.

Dear Sir,—The announcement that you had pointed a Committee to consider and report on the using of the Working Classes in England and Wales a welcome one, but when one read the names of ten gentlemen appointed to this onerous task the isfaction was less pronounced, for both in numbers l in knowledge of the question they most certainly nt strengthening, and anyone who consults "Who's io" will realise that, great as may be the experience l capacity of these gentlemen, in only one case can y be said to be associated with the housing of the ple.

Among the many who have devoted years to the k of housing the artisan and labouring classes I will ntion only a few, who will be recognised by all for ir work in this connection, namely: Prof. Leslie P. ercrombie, Mr. Edward Bond, Mr. Edwin Evans, C., Mr. W. J. Dulake, Viscount Dunluce, Mr. Ewen rper, Mr. Delissa Joseph, Mr. B. S. Rowntree, Sir xander R. Stenning, Mr. Henry Vivian, Sir T. C. T. rner, Bart., and Mr. E. S. Waterlow.

No more important inquiry could be instituted than into the housing of the people. Most of those se names I have mentioned have for many years n devoted to providing dwellings by means of pri- enterprise, and if we are wise we shall be guided their experience at the close of the war, when the nand for houses will become very great indeed, and n the temptation to meet it by State enterprise will held out as a panacea regardless of the fact that for proper functions of the State it will be more than r difficult to get the necessary attention if personal rty and the well-being of the community are to be served.

I am, yours faithfully,
MARK H. JUDGE.

, Pall Mall, S.W.1. August 7, 1917.

Mr. Hayes Fisher, President of the Local Govern- nt Board, on the 10th inst., caused the following er to be sent to Mr. Mark H. Judge:—

Dear Sir,—I am desired by Mr. Hayes Fisher to nowledge the receipt of your letter of the 7th inst. pecting the Committee which he has appointed in nection with the provision of dwellings for the king classes, and to forward to you a copy of the ns of reference to the Committee, from which you observe that the Committee is an expert body ointed to deal with technical questions of building struction. Mr. Fisher wishes me to add that, whilst recognising the beneficial activities of the gentle- you name in connection with the housing problem, has felt that a Committee of this character must necessarily be largely composed of experts in materials and actual building.

Yours faithfully,
(Signed) R. B. CROSS.

Enclosure with the above letter:—

I hereby appoint Sir John Tudor Walters, M.P.; Sir Charles Allom; F. Baines, Esq., M.V.O.; James Boyton, Esq, M.P.; Wm. Fairley, Esq., M.I.C.E.; G. Marlow Reed, Esq.; J. Walker Smith, Esq., M.I.C.E.; J. Squires, Esq.; Raymond Unwin, Esq., F.R.I.B.A.; Sir Aston Webb, K.C.V.O., C.B., to be a Committee to consider questions of building construction in connection with the provision of dwellings for the working classes in England and Wales, and report upon methods of securing economy and despatch in the provision of such dwellings. I further appoint Sir John Tudor Walters to be Chairman, and E. Leonard, Esq., of the Local Government Board, to be Secretary of the Committee.

(Signed) W. HAYES FISHER,
President of the Local Government Board.
26th July, 1917.

On August 17 Mr. Judge wrote to the President as follows:—

Dear Sir,—I beg to thank you for your reply to my letter of the 7th inst., and for the copy of the terms of reference to the Committee. I note the special work you have appointed the Committee for, and am glad to have your recognition of the beneficial activities of the several gentlemen I named in connection with this housing problem. You are certainly right when you say that a Committee of the character that this is should be largely composed of experts in materials and actual building. My letter carried this view a little further by suggesting that the knowledge of materials and actual building should be with regard to workmen's dwellings. I still think a Committee of ten is too small for the great inquiry to be made, and I am persuaded that by adding some of the architects named by me you would very greatly strengthen your Committee, while on the question of economy and despatch in the provision of workmen's dwellings some of those named by me, though not architects, are so fully conversant with the best methods of securing economy and despatch in the provision of both cottage and block buildings for the working classes that I am sure your Committee would be much better equipped for their work if some of them were added.

The Late Baron Grant.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—In connection with the interesting remarks of "Diogenes" on the subject of Leicester Square and Baron Grant (see issue of August 15), I would remark that the purchase of the ground, its reclamation, and transfer by deed of gift to the then Metropolitan Board of Works, in trust for the people, cost him altogether about £35,000, and the act was a very creditable one, considering what a disgraceful state the Square was in, as I well remember, previous to its transformation.

The donor's name was really Albert Gottheimer, but he changed it to Grant, and it was in connection with the City of Milan Improvements Co., Ltd., which was launched about 1865, that he had the title of "Baron" conferred upon him by the then King of Italy.

One of the most conspicuous examples of his vanity was the building of a colossal marble palace at Kensington Gore. He acquired several acres of ground, then known as Jenner's Rents, and thereon erected one of the most pretentious abodes that London had ever seen at that time. Its cost was roughly estimated at half a million sterling. Before the building was finished, however, Grant became involved in difficulties, and "Kensington Folly" was demolished, the land upon which it stood being subsequently split up into lots to suit purchasers.

Gipsy Hill, S.E. J. T. R.

PROPOSED NEW GRAIN STORAGE BUILDINGS FOR LONDON.

Having recently reviewed, in the light of probable future requirements, the question of the facilities for the discharge and storage of grain, the Port of London Authority have just approved of an important scheme of extension, to which effect is to be given after the war. The site selected for the proposed new accommodation is between the South-West India and Millwall Docks, where already the greater portion of the grain business is carried on. Here three of the new quay berths already sanctioned will be equipped for the discharge of general cargo, with the addition of overhead bandways running the whole length of the quay, in which will be placed the bands for conveying grain. The most important section of the work will be the construction of a reinforced concrete silo granary with a total capacity of 40,000 tons immediately to the west of the existing central granary. It will be possible to increase the stowage accommodation of the silos by an extension of the southern end, whilst further floor storage can be provided by an extension of the central granary in a similar direction. Ample facilities will be provided for the turning over of grain out of condition, and the equipment will include a special thermometer installation, dryers and coolers, graders, separators, winnowing machines, weighing machines, sacking machines, telephone and signalling apparatus and fire appliances. At pre-war prices the total cost of the complete scheme is estimated at £509,300. Under the scheme the machinery for handling grain at many of the smaller existing granaries at the Surrey, Millwall, and Royal Victoria Docks is to be brought thoroughly up to date at a pre-war estimated cost of £72,800.

STANDARDISED PLANS AND THE HOUSING PROBLEM.

Mr. Baillie Scott has addressed the following letter to "The Times": "As one who has had considerable experience in the designing of small houses and cottages on economical lines, will you allow me space for a few comments on the suggestions made by the Joint Committee on Labour Problems in connection with the proposed scheme for building a million houses? However urgent the demand, it must be borne in mind that these houses will constitute a permanent part of the new England to be built up out of the ruins of the war. To allow each locality to build its own quota without restrictions or control would mean, in the majority of cases, the creation of rows of those mean and sordid dwellings we are all so painfully familiar with on the outskirts of our towns. To produce the best results, in the circumstances, it is essential that there should be a central committee to advise as to the plans of the houses and as to their arrangement on the ground. This committee should consist of architects who have made a special study of this kind of work.

"If we possessed, as in the past, a sound habitual tradition of building the matter might safely be left to individual communities to adorn the world with cottages rationally planned, and each with its own particular local character and beauty.

"That is for us to-day an ideal we cannot hope to achieve; under modern conditions it seems inevitable to admit the economic advantages of standardisation and repetition of plans. This makes it all the more necessary that the plans so standardised should be the best that can be procured. I am entering no plea for what is now known as "artistic" building. I only ask that these new houses should be at least as scientifically adapted to their uses as our implements of war—that they should be rationally and sensibly designed and built, and so should possess that comeliness of aspect which results from the possession of these qualities. This end cannot be achieved by the policy of laissez-faire, but only by inviting the aid of those who have made a special study of the subject."

NEWS ITEMS.

New Church for Finsbury Park.

Steps are being taken to raise £2,100 for the erection of a church and institute at Finsbury Park in connection with the North London Institute for the Deaf and Dumb.

Change of Address.

Messrs. George Baines and Son, architects, late of 5, Clement's Inn, Strand, London, W.C., have removed temporarily to 121, Victoria Street, Westminster, S.W., during the Government occupation of Clement's Inn.

A List of Enemy Firms.

We have received from the Controller of the Foreign Trade Department a copy of a new list of additions to the statutory list of firms of enemy nationality or enemy association with whom persons in the United Kingdom are forbidden to trade. Copies of this list can be obtained at a trifling cost from the Superintendent of Publications, H.M. Stationery Office, Imperial House, Kingsway, W.C.

Pentonville Memorial Cross.

A faculty has been granted by the Consistory Court of London authorising the vicar and churchwardens of the parish of St. Silas, Pentonville, to erect in the centre of the foreground of the church in Penton Street a churchyard cross of Portland stone, 17 ft. high, with a figure of Christ. On one side of the plinth is inscribed, "Lest we forget," and on the other "To the greater glory of God and in loving memory of those who have fallen in battle for England, Home, and Duty."

Memorial to Lieut.-Col. Mobbs.

At an influential meeting held in Northampton it has been decided to organise a fund to raise a memorial to Lieut.-Col. Edgar Mobbs, the famous Rugby international, who was killed in action on July 31. It was suggested that a portion of the fund should be devoted to promoting the physical training of schoolboys, that part should be used for the assistance of disabled soldiers, and that a memorial hall should be erected. These and other proposals will be duly considered by a special committee.

Iron and Concrete Ships.

The first Norwegian iron and concrete ship has just been launched at the Porsgrund Cement Works. The ship is built on an entirely new system with the bottom upwards, in which extraordinary position the launching took place on a sort of underlying sledge, which glided out with the ship. When the water was reached the hull became detached from the sledge and gradually sank up to a certain point, then subsequently slowly righted itself. This particular ship, which is of 200 burden, was built in three weeks, but next will only require about half that t as the original frame will be used for subsequent ship of the same size. casting of the ship, when the frame is pleted, will this time take only two It is intended to start the wholesale b ing of iron and concrete ships of 200, and 1,000 tons. A 1,000-ton ship wil completed in six weeks.

Threatened Strike in Nottingham

Two thousand five hundred men in Nottingham building trade are deman an advance of 3d. an hour on exi wages, which range from 9½d. per for labourers to 1s. 0¾d. for stonema Notices have been given by the men, however, have now decided to wait a days longer in the hope of reaching agreement with the employers.

Dublin Rebuilding Loan.

An inquiry has been held in the Hall, Dublin, into applications by Corporation for sanction to loans amo ing to £76,000 under the Dublin Re- struction (Emergency Provisons Act) the purpose of widening portion of Earl Street and portions of Usher's Lower Bridge Street, Cole's Lane, Henry Street, and the remaking of paths and raising and repairing carriage-way in Lower Sackville St and the making of advances to owner rebuilding houses and other pur under the Act.

A Book on English Church Wood

Messrs. B. T. Batsford will shortly "English Church Woodwork," a stu craftsmanship during the med period, the text of which has been wri by Mr. Frank E. Howard, the well-k archæologist of Oxford, while the illu tions are contributed by Mr. F. Crossley, of Chester. The book is the to present a full survey of its great ject, and is a reminder of the extraord achievements of English craftsmen in design and carving of church fitting art in which it is scarcely too muc claim for England a supremacy du later mediæval times. The striking varied beauty and masterly executi this native work will prove remarkabl surprising even to those not ignora Church Art. The large number of ori illustrations from photographs arranged in the endeavour to defin characteristics of the different schoo local design prevalent at the time, cularly in East Anglia. the Midlands the South-Western Counties, a fascin subject which will repay further study research.

OBITUARY.

Mr. A. T. Jackson.

We regret to announce the death o Anthony Thomas Jackson, which place on the 16th inst. at his resid Tighnabruaich, Derryvolgie Avenue, fast. The deceased gentleman, who reached the advanced age of seventy- was the son of the late Mr. Thomas son, a well-known architect who wa designer of St. Malachy's Church, th Museum in College Square, and other buildings. Amongst the works for he was responsible were St. En Church, the Municipal Buildings, known as the Old Town Hall, an Working Men's Institute.

WAR·BVILDINGS·SECTION

TRAINING CAMP CONSTRUCTION IN THE U.S.A.

HE military authorities in the United States are just now confronted with tical problems to those which we our- s had to face in the early days of the One of the most pressing of these e provision of barrack accommoda- for the vast new armies which are g formed for service in Europe. In pages, from time to time, accounts been given of the hutments provided ur own troops in various parts of the try. For the purpose of comparison, interesting to study the barrack build- which are now being erected on a scale in the United States. A stan- plan, devised by the Quartermaster- ral's office at Washington, has been ted, and we understand from our emporary, "The Engineering News- rd," that effectively localised respon- ty is a feature of the system upon h the sixteen cantonments for the onal Army are being erected. The nisation is under direction of a con- ting quartermaster, who is aided by litary guard officer, and an engineer working under a consulting engi- , an expert on water and sewerage lems, and, in some instances, an rt on town-planning. To this orga- ion the task of building each camp is entrusted with full authority under al building plans drawn at Washing- Modification of the cantonment lay- o suit the local topography is left to local organisation. Sewerage and r-supply plans are also developed ly, the typical design made at Wash- n being only a general guide.

Preparatory Work.

ilroad spurs or sidings are to be built the nearest main line at railroad After completion of the canton- the railroad is not to form part of ransportation system, however, and idings are to be removed.

sh delivery of materials will be secured by (1) filing copies of material-order certificates with the Car Service Committee of the American Railway Association and (2) using shippers' way-bill envelopes indicating that the shipment is for Government use.

To get assured check on quantity and quality of lumber, the principal material, a double inspection is provided for it. Inspection of quantity and quality will be made at the mill, and quantity will again be checked at the site.

The fire danger in camp work calls for early consideration. Before any material is delivered all brush, rubbish, and dry grass is to be cleared and burned for 300 ft. distant from all storage and building sites. Water casks and fire pails are to be distributed and a patrol established at the start; also, signal systems and calls for the fire departments of nearby towns are to be established. Later, fire companies with their own apparatus are to be organised. Smoking, fires open lights, etc., will be limited by special rules.

The rate of pay for labour as a general rule is not to exceed the union scale prevailing in the particular locality on June 1, 1917. Arrangements for working hours and overtime are at the discretion of the constructing quartermaster and the contractor. Sub-contracting is not looked on with favour and will require special approval.

The barracks for one regiment may, as soon as built, be used to house the contractor's labour forces, with restrictions as to use and subsequent cleansing and fumigation.

To keep the Washington headquarters in close touch with the work, each constructing quartermaster is to make a daily telegraphic report and a weekly written report, the latter reviewing the work of the week comprehensively and including graphical charts of material receipt and construction progress in the several classes of work.

A field auditor will check the orders and bills. Bill duplicates will be checked by his force on delivery of material; later the duplicate invoices are to be checked against them and finally the original invoice substituted. Very detailed routine has been established for this, for employment records, time cards, and related items of the accounting work. The effect of this systematisation is to render the central control at Washington as simple as practicable with work so extensive and done under such high pressure as this cantonment construction.

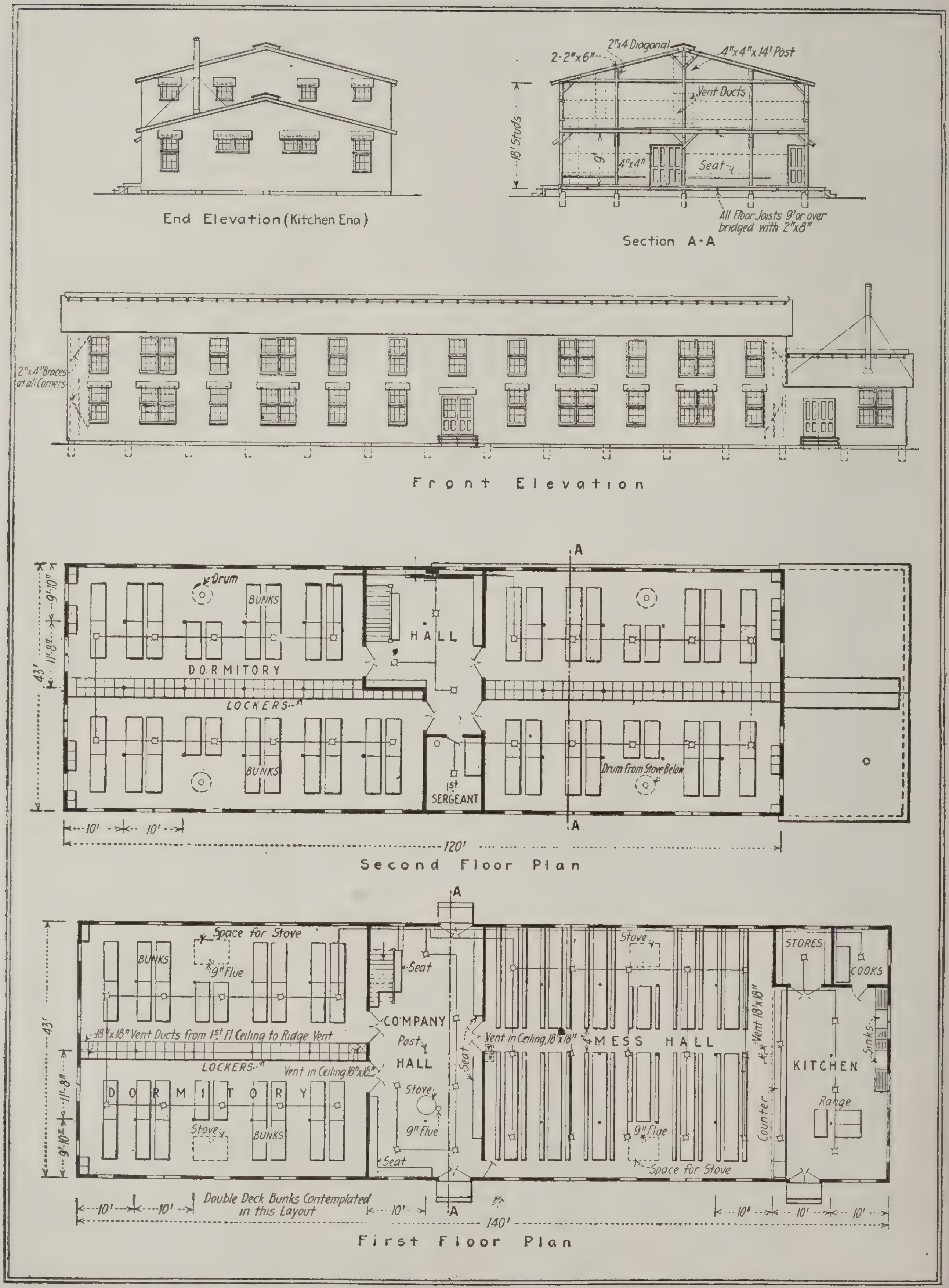
Payments to contractors are to be made about the ninth of each month regularly, and as often during the months as deliveries justify. A system of financial correspondence by telegraph has been arranged to enable Washington to supply the local office with funds daily if required.

Details of Construction.

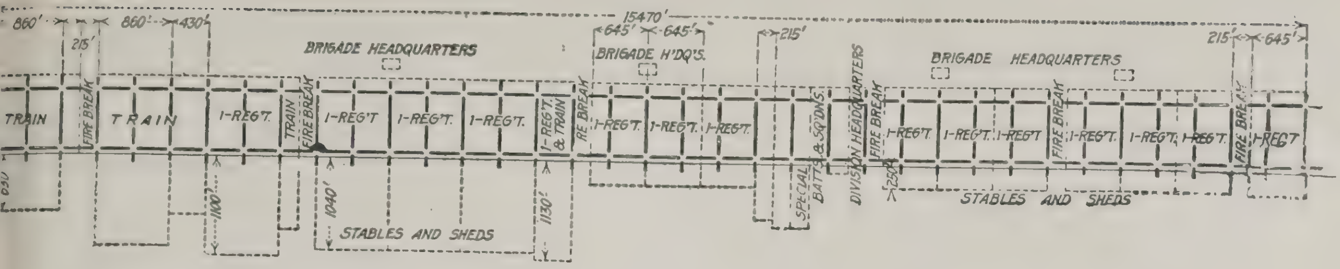
The drawings, reproduced overleaf, show typical arrangement and construction of the buildings of the cantonment. The barracks, two stories high, contain each its own kitchen and messroom. Lavatory buildings are separate.

The lines of buildings will be interrupted by 300-ft. fire breaks spaced about 2,100 ft. apart. The roofs of buildings are required to be of metal or other fire-resisting material, and the side boarding must give a 15-in. clear space above ground or be carried down to the ground all round. If paint is used it must be a cold-water paint of some fire-resisting quality. Storage buildings and the like will be metal clad. Inflammable materials will be stored in detached buildings, 150 ft. from other buildings if storing over 75 barrels of oil. Gasoline in quantities over 15 gallons will be stored in underground tanks.

Fire stations equipped with motor fire apparatus will be provided, usually four per cantonment, or so located that no building is more than a mile away from a



COMPLETE LAY-OUT OF A STANDARD COMPANY BARRACKS FOR THE U.S.A. NATIONAL ARMY.

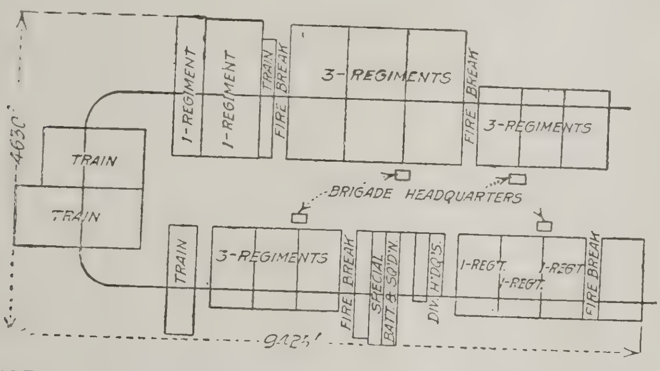


STANDARD CANTONMENT LAID OUT IN A STRAIGHT LINE EXTENDING OVER THREE MILES.

station. One fire station will be ed in or near the hospital group, a convenient position.

Water Supply and Sewerage.

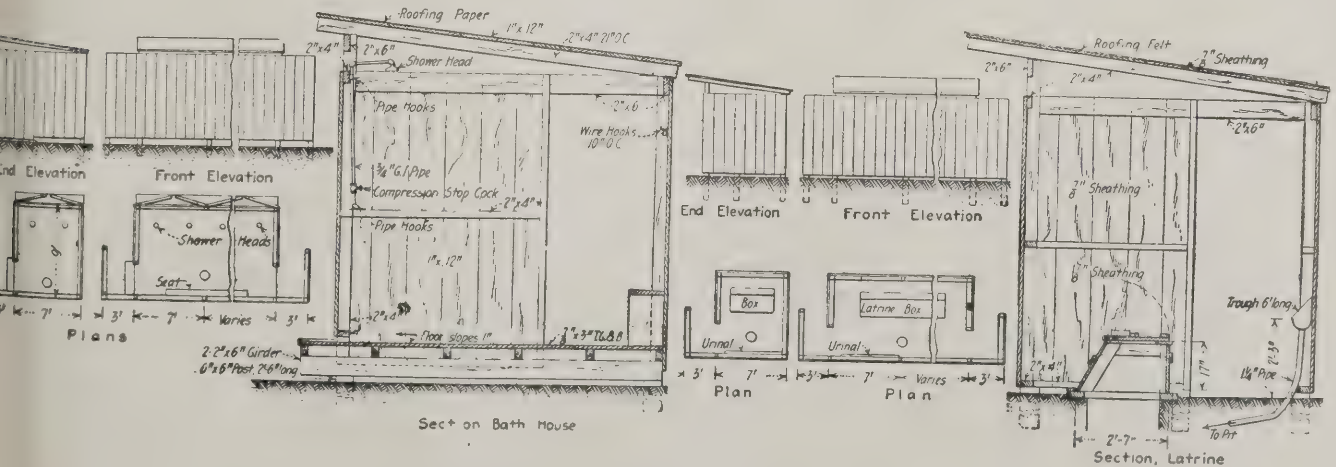
e problems of water and sewerage to be worked out by the constructing ermaster with his assisting experts. intended supply capacity is 55 gallons apita per day, but the one hour supply must be about 150 gallons per capita ay; the normal pressure is 60 to 85 lb. sq. in. Two 10-in. or 12-in. mains gh the length of the site will be red in most cases. Wood-stave pipe of nachine-wound type is contemplated, curves and specials of cast or wrought Storage is to be provided (if miniamount = 1,000,000 gallons capacity vel or 300,000 gallons high-level). e sites will be drained by open es. The sewer system is for sanitary e only. To give double assurance st entry of water into the sewers the pipes are to be laid in separate nes, and the connection of specials is made with deep or wide sockets. All s are vitrified salt-glazed pipe, sizes 6 in. to 30 in., laid on gradients not less than 0.005 for 6 in. and 0.0007 for 30 in.; the joints are 1:2 cement mortar, except that deep-socket joints are caulked with hemp or jute and then poured with hot compound. Deep-socket pipe is to be used in wet ground and in wooded areas. All sewers except outfalls are to have manholes at 300 ft. to 500 ft. spacing.



ALTERNATIVE ARRANGEMENT OF STANDARD CANTONMENT.

The sewage is to be discharged into adjacent streams untreated, wherever possible. Where treatment is required, single-storey septic tanks, either wood or concrete, are to be built, with gross capacity 10 gallons per capita. At Ayer (Mass.) and Wrightstown (N.J.), sand filtration may be used; in some other locations sprinkling filters are likely to be added to the tanks. Automatic chlorinating plants are called for, except where the system has sand filters.

No provision for electric wiring has been made so far. Laundries also are not in the plans; the use of civilian laundries is counted upon in the first instance. The barracks are to be heated by stoves in the lower storey, with smoke pipes extending through the second storey and the roof.



TEMPORARY BATH HOUSE AND LATRINE.

AFTER THE WAR PROBLEMS OF RECONSTRUCTION.

London Street Architecture.

At a meeting of the Arts and Crafts Section of the recent Hampstead Garden Suburb Conference, Mr. Paul Waterhouse, F.R.I.B.A., lectured on "London Street Architecture." He said that when he spoke of London the thing he had in his mind was not something identical with the ground-landlords' hold on the earth—there actually existed tangible and proprietary rights over London which no ground-landlord had or could acquire. Briefly, his trouble about London came under the following headings: (1) There were a few blemishes that he wanted to see removed. (2) There were a great many opportunities in London that he wanted to see seized. (3) There were certain changes which had, on utilitarian grounds to be made in London—he wanted to see them controlled. Finally, there was in London, as in all things, a process of change and decay necessitating renewal and rebirth. He wanted to see that renewal and rebirth conducted on principles of honourable parentage and rational economy. By economy and parentage he implied architecture, for an architect's function was nothing less than to see that money spent in breeding buildings gave birth to worthy offspring, and that it was worth the money spent upon it. In other words, he wanted to make sure that every large street improvement was a considered part of a general scheme for London and architecturally dignified; that every small street improvement was at least under artistic control, and that every individual house was, from the architectural point of view, appropriate and good. Mr. Waterhouse then explained in detail his scheme, which he propounded for the first time six years and a half ago in London, and which appeared in the Journal of the R.I.B.A. for

February, 1911. Briefly, he proposes that the city and each of the central boroughs shall have a borough architect, appointed to pass, criticise, or condemn every design intended to occupy a frontage in his domain and to take personal artistic responsibility for groups of buildings to be erected in squares, at bridgeheads, or in newly laid-out spots of public importance, which ought either to form a combined design or to make part of a congenial composition. He also proposes the appointment of a superarchitect, to be known as "Architect of London," who would take supreme responsibility for the architectural welfare of the metropolis. Continuing, Mr. Waterhouse said he admitted that the scheme was a large one, but he did not think it presented any difficulty whatever and the expense would be a mere nothing. Even if it did cost money it would be money well spent, for beauty was actually worth money, and the absence of it resulted in direct pecuniary loss. He said deliberately that London could not afford ugliness, could not afford chaos, could not afford that lack of systematic control which resulted, to put it quite plainly, not in economy, but in ill-considered expenditure.

A Civic Survey.

At the same meeting Mr. H. V. Lanchester, F.R.I.B.A., put in a plea for the extension of civic surveys as part of the reconstruction programme of the future. They might, he said, be inclined to imagine that even when everything possible had been done with a survey programme it was still but a dry collection of facts, presented, may be, in a convenient way, but not conveying any vital impression. That was not the way he looked at the matter. Such a survey, if the sections were properly dealt with in relation to each other, did show in the most vivid fashion the whole life of the community past and present and provided them with the very best foundation on which they could construct a programme for the future. Further, it picked out with ruthless accuracy the weak spots, while at the same time it recorded what was worth preservation, it showed how bad conditions had operated to the detriment of the individual type, and how fine traditions had had a good influence from generation to generation; changes of one kind or another in every aspect of life were clearly exhibited, and a picture of the whole civic organism was presented that could be secured by no other means.

Co-ordination of Arts and Crafts Societies.

On the last day of the conference (August 17), Miss May Morris, in a paper on "Co-ordination of Arts and Crafts Societies," remarked that the idea of coordination, co-operation, or communal action had become more and more familiar to men's ears. In the great need that had come upon them, they inclined to throw off much that was artificial and come down to the bed-rock of reality, and even if they did not in so many words admit it, by their actions they admitted the utility, the pressing necessity even of co-operative effort. In the handicrafts with which she was especially concerned, she had seen more and more of the wastefulness of labour that was not co-ordinated. Craftsmen, whether working in a bond of mutual help or not, were bound to be dependent on each other's work, and they wasted much time in getting their schemes fitted together, owing to all sorts of technical hitches such as would occur to anyone used to the organisation of labour. The existing arts and crafts organisations were mainly exhibition societies, and probably as much co-ordination as might be desirable between the different groups already existed. The coordination she would like to see would be a co-ordination of producing societies having aims in common; those aims, in short, being first the conservation and development of what remained of the traditional crafts of the country, and, secondly, the prosecution of work on fine traditional lines as far as was consistent with changing conditions. Having laid down the axiom that machinery could and should be used by the craftsman for the roughing out of material, Miss Morris outlined a scheme at which she and others were working for the carrying out of handicrafts in the country with the least possible waste of man-and-woman power. They were, she said, hoping to organise the workers into their guilds of craft and to co-ordinate the guilds into some central grouping where matters of mutual interest might be considered and where information might be had by the public concerning the crafts of the country and concerning those working in them—craftsmen whose position in their guilds under such an organisation would be a guarantee of efficiency.

Mr. C. Harrison Townsend, F.R.I.B.A., in a concluding address, said he hoped those who had attended the meetings would carry away something more than a memory of deeply interesting papers. They had heard much: let them do, at all events, a little. Let them try to shape something that would show in the after-the-war times that they, with time and opportunity before them, employed them in massing their forces and in preparing and perfecting their munition for that gentler war the artist always had to wage against an ugliness, the result of laziness of mind, and a commercialism sterile because it was selfish. There was no doubt that any common action on the part of craftsmen framed towards one objective necessarily demanded from the individual and the body of workers alike some self-suppression, some sinking of personal claims, some service under the condition of "working to orders," to which, as a rule, the artist was not very amenable. Experience, however, had shown at the exhibition recently at Burlington House, and earlier at the Ghent exhibitions, that the inspiration of a largely conceived common end led to an enthusiasm on the part of those engaged in it that worked its way down from the head or chief of the undertaking through the whole body of the workers. That enthusiasm led to forgetting and eliminating the personal smallnesses that might stand in the way of the great success of the common achievement and to a loyalty of co-operation to which that success should be due. In some such scheme of co-operation it would be possible with a general unity of effect in view, to lay down for the workers generally accepted conditions, the result of discussion and agreement. All working to those lines, there would be as a result a harmony of effect in which each special part or item did not clash nor fight in competition with its neighbour as a rival, but helped and supported it as a friend.

The conference, of whose earlier deliberations a report appeared in our last issue, has done useful work in drawing attention at a most appropriate moment to many important aspects of the work of reconstruction which will have to be taken in hand at the end of the war. We sincerely hope that the effort which has been made will not be wasted.

LEGAL.

The Decoration of a Lady's House.

Morley v. Anderson.

August 19. Harrogate County Court. Befor Honour Judge McCarthy.

This was a case in which Messr Morley and Son, painters and decora Knaresborough and Harrogate, sued Anderson, of The White House, Cop Drive, Harrogate, for the sum of Mr. J. Lomas Walker appeared for plaintiffs, and Mr. W. Topham for defendant.

Mr. Lomas Walker said that the c was one by an old-established fir painters and decorators, with branch Harrogate and Knaresborough, agai lady who had recently come to liv Harrogate, for work done and mat supplied in connection with the decor of her house. The defendant took a h and approached Mr. Bell, the manag the firm, with a view to having ce decorations and innovations carried After various consultations he gave h rough estimate of the cost of the work, it was put in hand. As very frequ happened, the lady determined to mak entire alteration in the nature of the to be done at the house, and consequ the original estimate lost its vali Owing to the dampness of the hous work was not done absolutely to perfec but he submitted that this was a bon claim for work done by the firm's w men.

Mr. William Bell, manager for Me Morley, stated that he roughly estim that the cost of the original scheme w be £25 12s. 6d. with "extras."

His Honour observed that he did no preciate the point of the estimate bei rough one when the cost was estim down to sixpence. It was the most sp estimate he had ever seen.

The witness went on to say that a deal of varnishing and painting was in addition to the original estimate, the floors were also stained. There some defects in the work owing to papers having left the walls through dampness, but the firm were willin rectify this. A cheque for £20 wa ceived from the defendant in part pay of the £63 charged for the work nothing further had been paid.

Mr. Stead, the temporary d borough surveyor at Harrogate, said he estimated the value of the work do the house at £57, after a careful inspe His opinion of the finished work was it was not a first-class job, but there the circumstances mentioned by Mr. which rendered it difficult to make a job.

Mrs. Anderson, the defendant, said she thought the original estimate o was very reasonable, and in view of c extra charges she agreed to pay a su £30 or not exceeding £35 for the wh the work. She wanted the house decorated simply and neatly, but not vagantly, and she stipulated that th was not to exceed £35, because she not afford more. She made no alter in the work which she required to be at the house. She made frequent plaints about the way in which the was done and the man in charge se times informed her that this was in quence of the bad materials with he was being supplied. She paid £20 for the work, because it was done and incomplete. Mr. Morley ıpal of the firm on examining the admitted the defects, and undertook some of the papering and varnishing ld be done over again free. The ıdant admitted that she had very fastidious tastes.

her evidence was called as to the ts of the decorating work, and Mr. ıam then addressed his Honour on be- of his client.

s Honour gave judgment for the tiffs for the sum of £20, with costs.

PROJECTED LANGSTONE HARBOUR SCHEME.

body who has stood on Portsdown and overlooked the great expanse of —almost landlocked—which forms stone Harbour, or who has visited the itself with the object of forming an of its suitability for dock construction, doubt the wisdom of those who, desir- o ensure the commercial expansion of mouth, have fixed their vision on stone as a future centre of shipping ity.

tunately, says a special correspondent e "Journal of Commerce," the engi- ng problems involved are of a some- simple character. A report on the ct was prepared for the Portsmouth ıber of Commerce some years ago by rs. Sir John Wolfe Barry and ıers, and Mr. E. Crutwell, who was nally associated with the details of eport, has just visited Portsmouth for urpose of explaining to a representa- gathering of traders the engineering res of one Langstone project— ned to cost a sum of between o,000 and £2,000,000.

its present state Langstone Harbour ving to the shallow water across the only accessible near the time of high . Even at the top of the tide the har- can only be entered by vessels draw- 3 ft. or less, and this is reduced to a 10 ft. limit at springs. The bar, which consists of a deposit of sandy shingle to a depth of a fathom or two, with clay beneath, although subject to local shifting, has undergone but little change over a long period—except, and the point is important, a tendency as evidenced by an examination of old Admiralty charts dating back to 1783, for the depth of water on the bar to increase, a tendency which it is believed is likely to continue. If a channel were dredged through the bar it is unlikely, therefore, that such dredging would be required to maintain the required depth. This, it was suggested in the report, should be a channel 600 yards wide, with a depth at high water springs of 25½ ft., but the recent trend of opinion favours the provision of a deeper channel, dredged in a westerly direction to give vessels approaching the harbour in bad weather the protection afforded by the Isle of Wight.

The first work which ought, it is considered, to be put in hand, pending the construction of the dock system, is a tidal quay, extending north and south for a distance of 3,900 ft. along the Portsmouth side of the harbour. The form of construction proposed is that of a solid concrete wall made out of the shingle dredged from the entrance channel.

The wet dock should, it is suggested, be constructed on a site on the foreshore west of the tidal quay. An entrance lock, which, it is thought, might be at least 650 ft. long and 80 ft. wide, but probably of greater dimensions, would give access to the dock system. An ample depth of water on the sills to meet the general scheme adopted would be provided. At the outset the dock system would, perhaps, consist of a main turning basin and one arm, but the plan outlined by Mr. Crutwell is for a main basin of 40 acres area, and three arms each of 10 acres water area, with over 18,000 ft. of quayage.

The railway connections would be of a simple character, and there is ample land available not only for capacious transit sheds and warehouses, but to provide sites for the industries which it is hoped would be attracted to the port.

ENQUIRY ANSWERED.

Strength of Superimposed Rolled Joists.

READER (Glasgow) writes: "Referring to the enquiry answered under the above heading in your issue of August 1, will you kindly explain how the horizontal shear per foot run is obtained from the maximum shear stress at each support, as in the example.

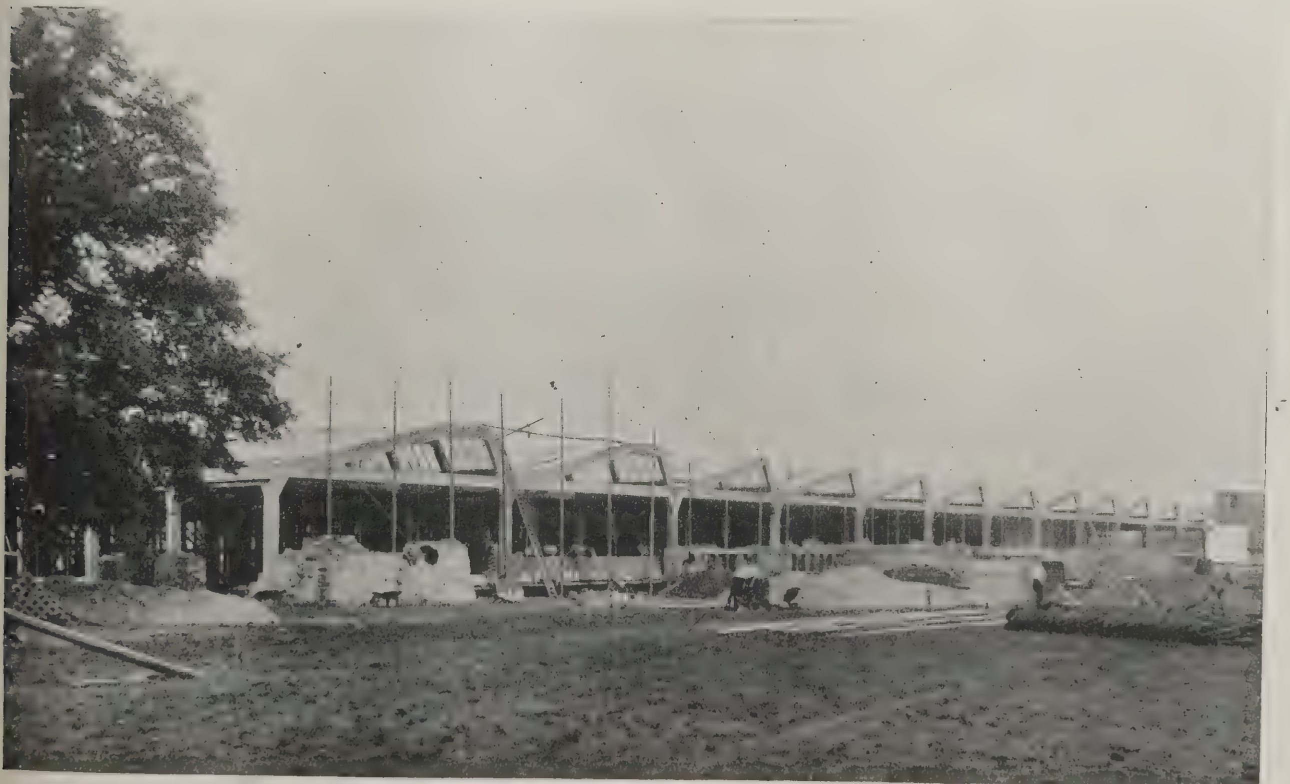
$$7{\cdot}5 \times \tfrac{2}{3} = 5 \text{ tons.}$$

I do not understand how the fraction $\frac{2}{3}$ is derived?"

—The exact calculation for horizontal shear per foot run in this case is somewhat complex, and an approximation was assumed at two-thirds the vertical shear per foot of depth. Exact calculation shows, however, that this proportion is hardly sufficient, and the case will be met by using ¾-in. rivets instead of ⅝-in. with the same pitch. If thought worth while, the pitch may be increased towards the centre of the span, where the shear is reduced to nil. HENRY ADAMS.

A WAR FACTORY OF REINFORCED CONCRETE.

The illustration reproduced on this page shows the east elevation of a factory which has a floor area of about 70,000 ft. super. The building is constructed of reinforced concrete posts and reinforced concrete north-light roof, and is designed on a frame-structure principle. The panels between the external columns are filled in with 14-in. brickwork. A number of doors and internal partitions to the office portion comprise the only woodwork in the building.



A REINFORCED CONCRETE FACTORY IN COURSE OF ERECTION. A. ALBAN H. SCOTT, ARCHITECT.

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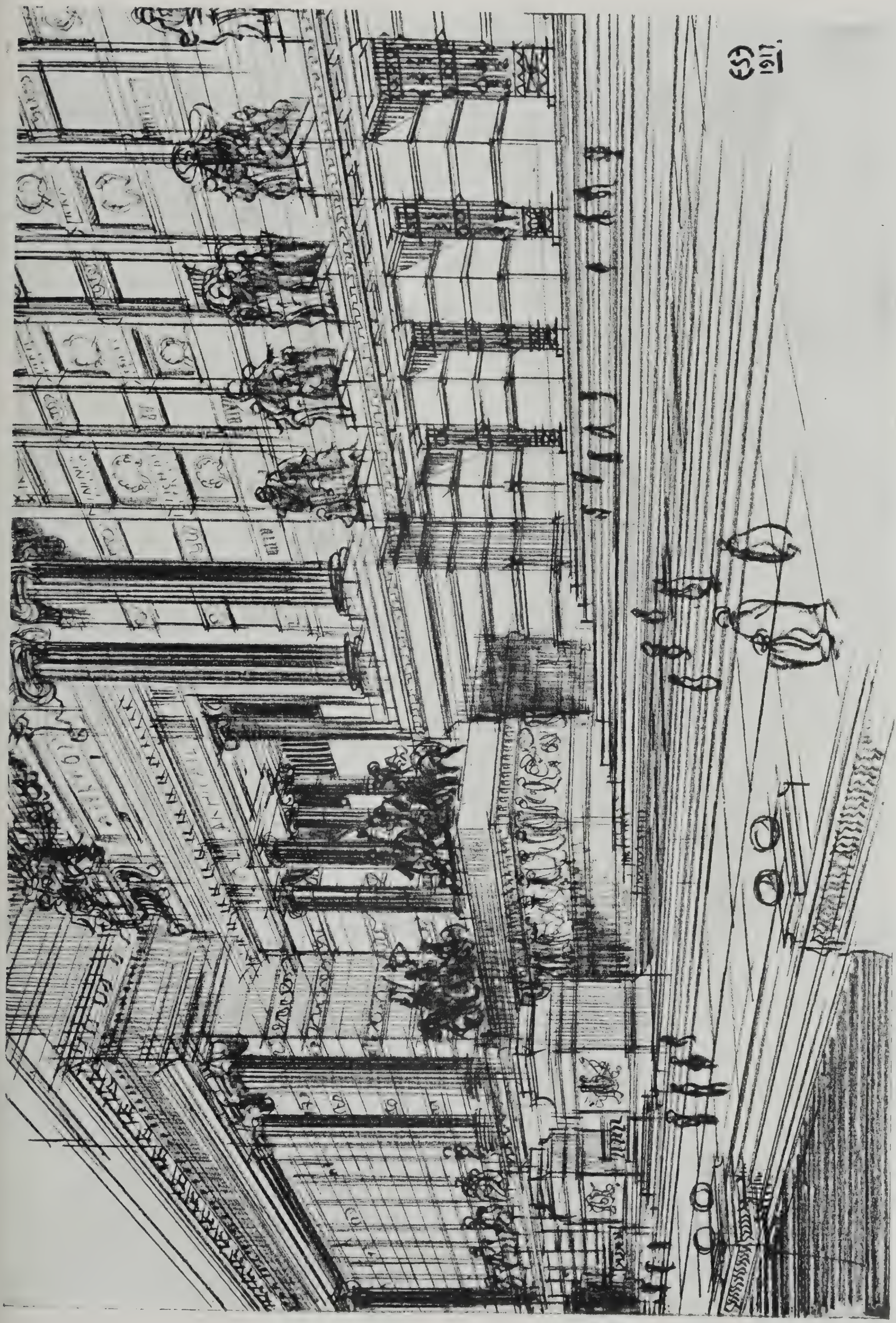

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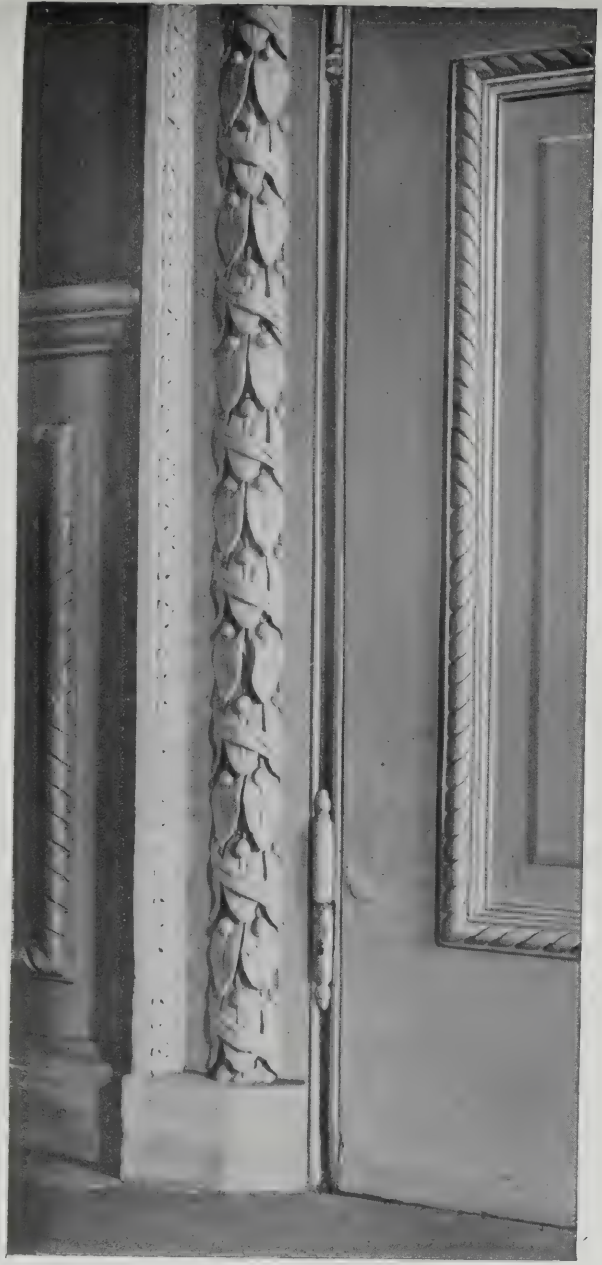
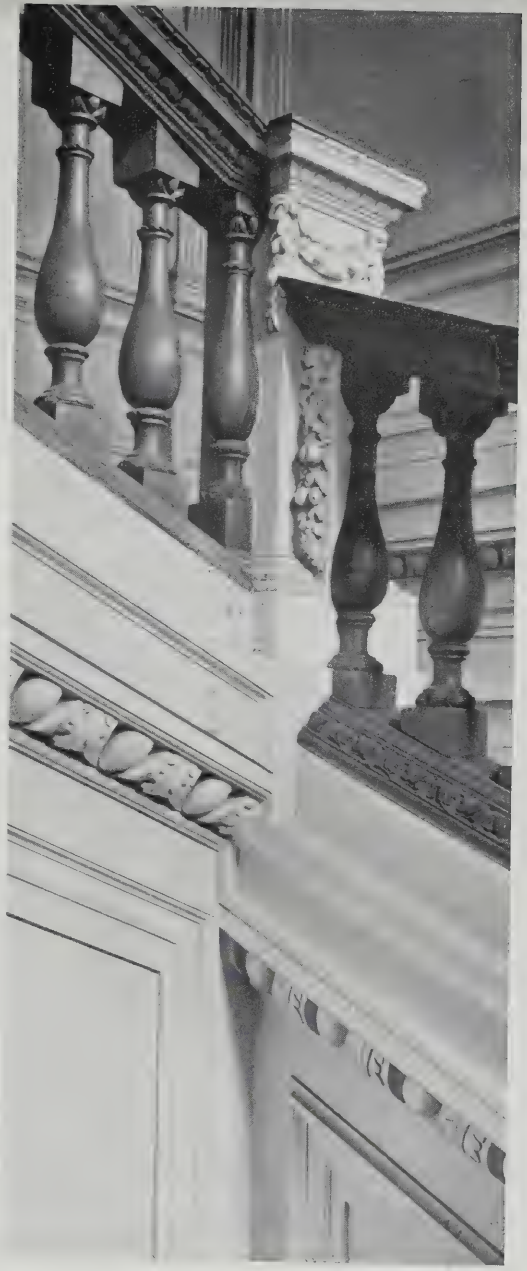
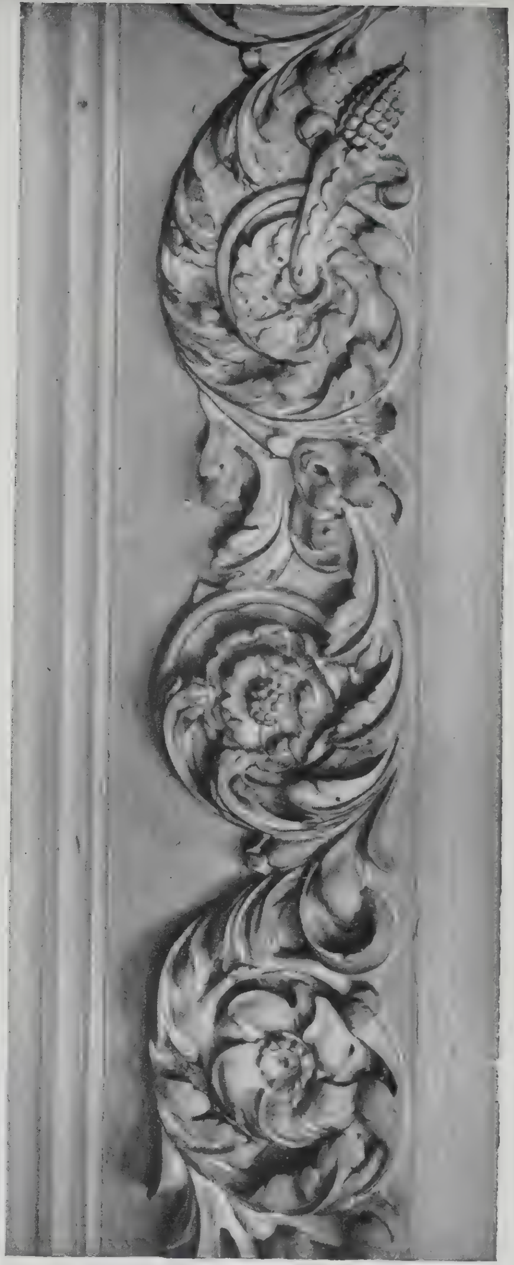


Detail of Door in Great Drawing-Room.



Detail of Staircase.



Detail of Carving at Head of Staircase.

DETAILS OF CRAFTSMANSHIP (SERIES II.). XXXVI.—ASHBURNHAM HOUSE, WESTMINSTER.

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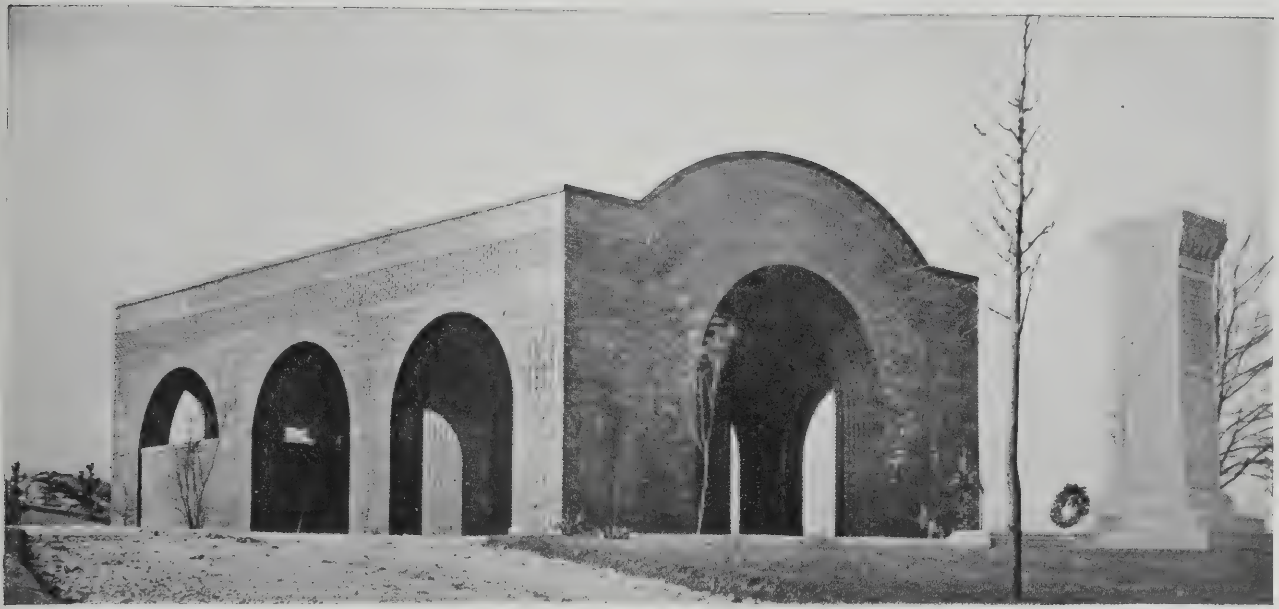

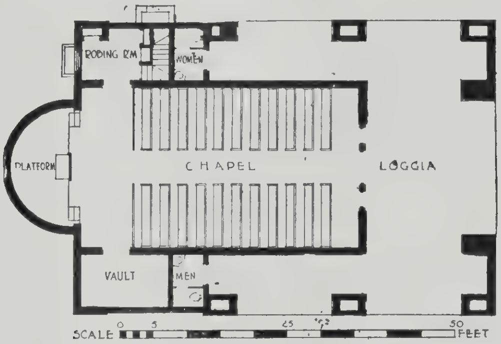

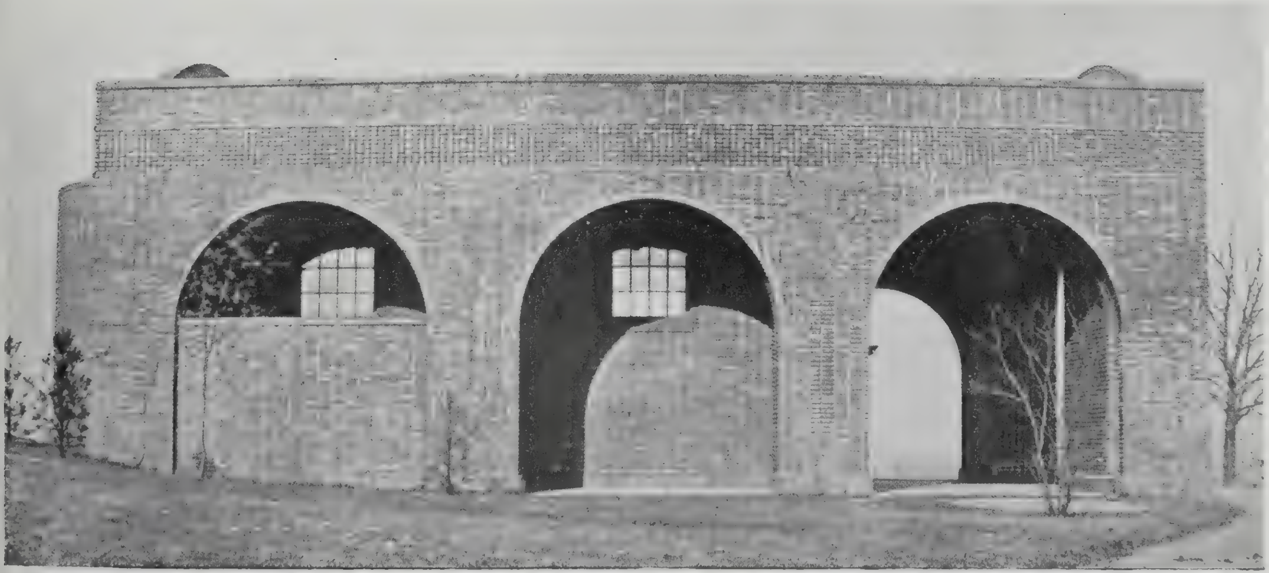

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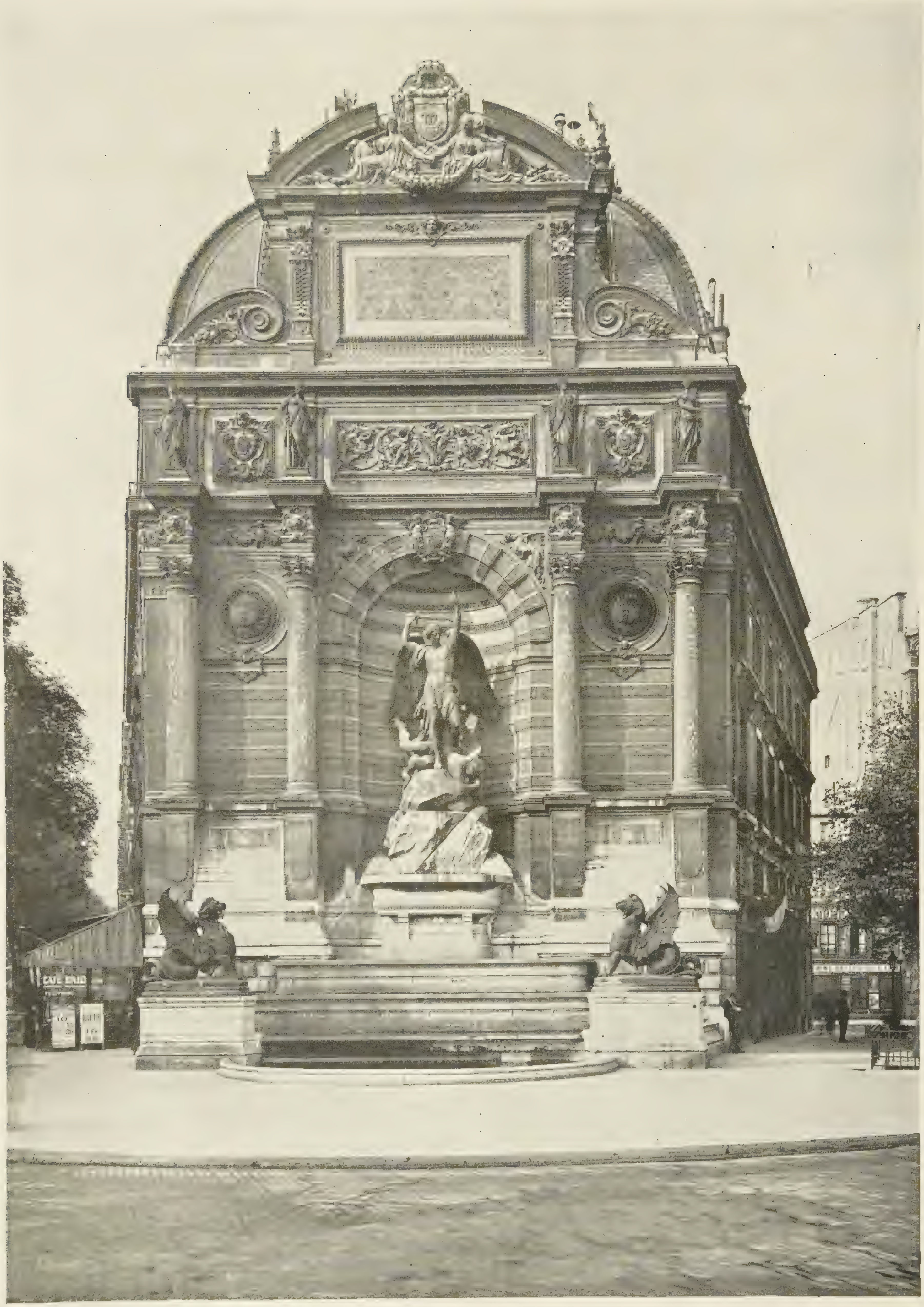

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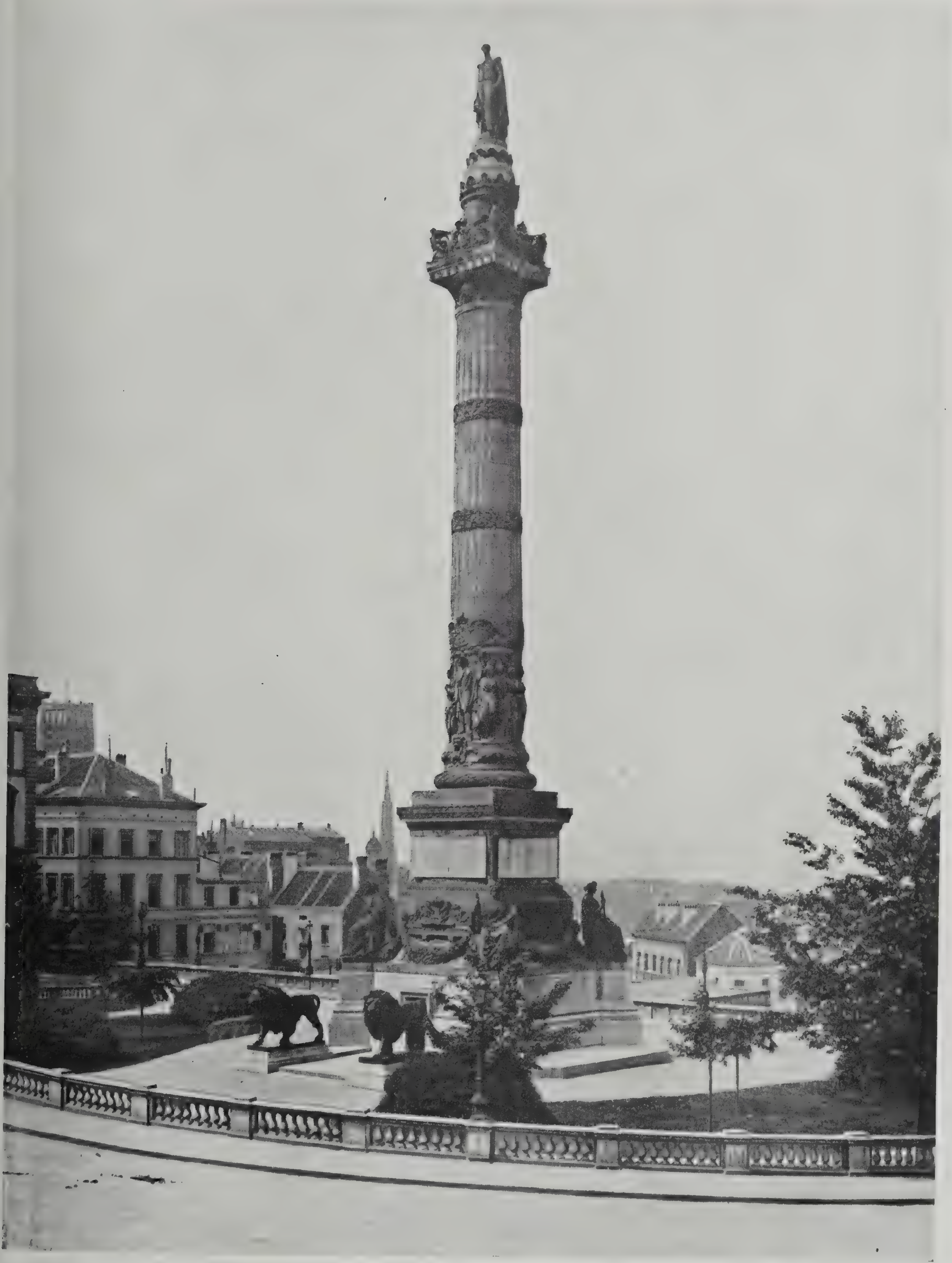
DAVIOUD, ARCHITECT.



MONUMENTAL COLUMNS AND OBELISKS. XI.—COLUMN OF CONGRESS, BRUSSELS.

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THE ARCHITECTS' AND BUILDERS' JOURNAL.

SEPTEMBER 5, 1917. *TOTHILL STREET, WESTMINSTER.* VOLUME 46. No. 1183.

N interchange of fraternal greetings between the . American Institute of Architects and the Royal Institute—we name them in this order for rtesy's sweet sake, although our own Institute took initiative—makes very pleasant reading. It is lly a very cordial and very beautiful expression on h sides of the sentiment "Hands Across the Sea." entiment," we said; for in neither letter is there the st trace of mere sentimentality, which is but a rious substitute for the genuine article. Both ers ring true; and we are sure that all architects in country will welcome with the most heartfelt satis- tion—nay, with an affectionate emotion that is ost too deep for words—the warm response of the erican Institute. As grateful to us as it is graceful hem is the assurance that they "have longed for striking of that inevitable hour when we might d shoulder to shoulder, brothers in arms as well as thers in art," in defence of the liberties of the lised world. Our hearts swell with pride at this ance, at this kinship in art and hand and soul, and can say no more than that we are profoundly ched by these spontaneous and irrepressible tokens mutual affection—a word that we phlegmatic tons seldom use, and never without sincerity.

* * * *

ast week we made a brief reference to some deli- ely ironical observations by "The Londoner" of "Evening News" on the chronic scorn by ladies of se-planning by mere man. We did it in fear trembling; but as there have been no hostile onstrations we venture upon another citation from daring author. He is for carrying the war the enemy's camp. "Do not let us argue r the scullery. Let us go to the room ch woman has made to her liking. It is called drawing-room. It is commonly the cosiest room in house: is its furniture disposed usefully? One ht say that the drawing-room of the little house, best parlour of the cottage, is a dreadful place. man has had her way with it, and that is a terrible . This is how the President of the Royal Institute uld begin his defence. He may go on with it: I e it to him. But let him find his courage and k up." Will the President respond to this clarion ? Not he; for, as we have seen, it does not greatly cern him. Moreover, we should not hesitate to lit him with more gallantry than to defend himself inst women; nor should we like to hear of militant es, armed with hammers and other forcible argu- ts, waiting for him on the steps of No. 9, duit Street, where, we believe, there are no back s. And since, on "The Londoner's" own showing, woman has always the last word in planning decoration, it would be in the highest degree olitic to create an impression that woman and archi- ure are antagonistic. A better way has been sen by the Architectural Association, which is ting ladies to become students in its schools in sical Bedford Square; and Mr. Lionel B. Budden reminded us that ladies were long since admitted he Architectural School of Liverpool University, re degrees in architecture are conferred and where may yet further fulfil the poet's dream of "sweet graduates."

* * * *

short Act with a long title—"An Act to provide an addition during the present war and a od of six months thereafter to the amount of the compensation payable under the Workmen's Compensation Act, 1906, in cases of total incapacity"—orders the payment of an additional twenty-five per cent. on the weekly payment for total incapacity specified in the Workmen's Compensation Act, 1906. This Workmen's Compensation (War Addition) Act, as its short title is, came into operation on September 1, and is to continue in force during the continuance of the war and for a period of six months after—an addition that has, of course, the effect of increasing the insurance premiums, when the employer wisely resolves to cover the added liability; but it is to be noted that the Commercial Union Assurance Company, Ltd., is charging only an additional ten per cent. on the premium payable on wages, etc. Nevertheless, the effect of the Act is to impose yet another burden on the long-suffering builder, whose only consolation is that, the restrictions on his industry having temporarily deposed him far below his normal position as the largest employer of labour, his war-time risks, unless he is one of the fortunate few who are fully occupied with Government work, are not greatly augmented by the Act. But is it not a serious objection against these Acts that the more an employer pays in wages the more he must pay in compensation for accident? It is logical enough that a man's compensation should be proportionate to his wage-earning capacity, but this fact must rather tend to the depression of wages. After the war the Workmen's Compensation Act should be subjected to drastic revision, but in the meantime passive obedience is the patriotic course. A copy of the new Act is appended to the above-mentioned company's circular on the subject.

* * * * *

Here, however, is a subject fully ripe for early consideration by the Builders' Parliament. Not for a moment can it be urged that a person maimed or otherwise incapacitated in the course of work should be callously left to bear the whole brunt of the misfortune; nor should the dependants of a person killed be denied compensation (necessarily inadequate) for their breavement. It is a strong sense of sympathy that has weakened opposition to an enactment that is manifestly unfair in its incidence. But, so much being granted, there remain many cogent pleadings for reform. To cast so heavy a burden on employers is to operate in restraint of trade. Vast sums of money are, in the aggregate, withdrawn from working capital and cast into the useful but absorptive pool of the insurance companies; and the Act is also a tax on wage-earners and an incitement to malingering. Also, when labour is plentiful, the Act creates an unfair preference of the young and vigorous over those who are presumed to be more likely to meet with accidents. In dangerous trades, during normal times, elderly men, or those suffering from some known physical defect, are unable to obtain work, because employers have a keen eye for hazards. A clever scamp—and the genus is not rare—will outwit the doctors and assume an ailment though he have it not, or will make an old injury serve his turn for two or three separate claims for compensation under different employers—a trick for which the nomadic and casual character of employment in the building trade lends peculiar facilities. All these things and many others will doubtless be carefully debated in the Builders' Parliament, which should recommend, we think, a tripartite contribution to a national compensation fund, to which the State, the employer, and the worker, should subscribe in equal proportions.

* * * * *

It may be asked, Why should the State contribute? We would answer, For many reasons that seem sufficiently cogent. If the war has proved anything at all, it has demonstrated the value of able-bodied men to the State. It has an interest in keeping them whole, whether for war-time activities or for peaceful industry, and it will be the keener to prevent accidents if every accident brings a claim on the exchequer. In its wider sense the State includes everybody: but why should the general public, which replenishes the exchequer, be made to contribute towards compensation for building accidents, for example? Because, on the larger view, the public shares the benefit of every man's productive activity in peace time, and of his destructive energy in war-time. It has an interest in keeping him fit, and in keeping him and his dependants off the rates in case of casualty. Possibly the same arguments apply to sickness and unemployment; and their adaptation to old age is a closed issue. To look at these matters sectionally has been a grave mistake, prolific, on the one hand, of congested wealth—on the other, of agglomerated misery. "What is that to me? See thou to that," is a declaration of the short-sighted selfishness that has operated disastrously against the co-ordination of forces which is essential to national welfare. Excessive individualism is, in this country, more to be feared than the so-called "State Socialism" of which the apparition—a bogey of his own creation—scared Herbert Spencer into some of his most irrational contentions. His idea of State Socialism seems to have been derived from the example of Prussia, where the State controls the people. In our country, the people control the State—that is, some of the people—namely, those in the majority at general elections—control it. In Germany, the State is the master; in Britain it is the servant—which makes all the difference in the world between these two brands of alleged State Socialism. Indeed, the term seems misapplied to the British variety—is a defamatory and misleading label, affixed to it in the interests of crass individualism.

* * * * *

To a great extent these fears are groundless. Surely nobody need take alarm at the prospect of the State's assumption of a larger measure of responsibility in civil affairs. It is to take a more direct interest in science, art, and industry—to become in short, more businesslike. It is to deal with practical affairs, not with detachment and aloofness, but with keen and intimate concern, collecting and disseminating useful information, aiding development, endowing independent research, granting loans, erecting Government laboratories, retaining experts for consultation on problems that manufacturers and traders cannot solve unaided, regulating labour problems and conditions, establishing a complete catena which shall render all branches of industry mutually helpful. By means of business departments attached to foreign consulates it shall keep an alert lookout abroad for business opportunities, faithfully and promptly recording all new tendencies. It is quite clear that in all these matters and in many more the State, remodelled on business lines, and co-opting the best talent that the nation can afford, would be capable of lifting this country high above all possibility of being outstripped by the most strenuous foreign rivalry. It is equally clear that only by united effort, economically and scientifically systematised and nationalised, can we hope to regain and retain commercial supremacy.

* * * * *

We come back to the efficiency of the worker, whose education is at the root of the tree. In the third of an important series of articles now appearing in " Westminster Gazette," it is affirmed that "the which emerges from the conditions produced by is that of doubling and trebling the output of e individual worker, without adding to the exhaus occasioned by a day's work," and that in the U States this has been accomplished through a g range of industries without the stimulus of war ditions. "The day's output of the American wo had become twice that of the British, and conseque American wages were on an altogether higher s The open secret lay in the better utilisatio machinery in every process, and in the determina to scrap one kind of machinery as soon as a better been discovered. War processes have enabled people to understand how lacking we were machinery, and what an immense difference in ou may be achieved by its full employment." Why however, that British workmen—so it has repeatedly alleged—do not get nearly the same re as the Americans from identical machines? because they cannot, or because they will not? can, but it does not follow that they wilfully deter not to. A very slight knowledge of psycho enables us to understand that unequal stimulus exertion nearly always produces unequal results, that not because the smaller producer is a consc and an unconscientious slacker, but because he is thoroughly aroused by direct personal interest. it to his advantage to do his utmost, and he will far more certainly than he would—or, rather, cou if he were not spurred on by the hope of sharing i effects. In America he usually has this hope; in country, as a rule, he has it not. *Voilà tout;* and is another item for the agenda of the Buil Parliament.

* * * * *

A concrete instance of the kind of service that State may be expected henceforth to render industry arrived opportunely at the moment when foregoing paragraphs were being written. It app that the Research Committee appointed by the Co of the R.I.B.A. to act in conjunction with the Gov ment Advisory Committee on Scientific and Indus Research has given a good deal of attentio "Timber in Relation to Decay and Preservation." memorandum on the subject has now been draw and submitted to the Government Committee. document, which, by courtesy of the Institute printed on a later page of the present issue, formu an excellent scheme for the scientific and system investigation of which the need, as we have urged, had become painfully apparent. One of suggestions of the R.I.B.A. Committee rather surp us by its boldness. It proposes the establishme "an institute specifically founded for the investiga of dry rot." One would have thought that the inq need not be perennial. It is added, however, such an institute has been founded in Germany, endowed with proper buildings and equipment. reference to the bureaucracy of the Boche will not fear, commend the project; for the present mood feel firmly convinced that anything the Germans either wicked or foolish—probably both—and i example for imitation in civilised communities. mans have not the slightest sense of proportio propriety, and, as Coleridge used to say, are stro addicted to the vice of "too-muchness." Also we afraid that this monumental project for a perma Institute for the Investigation of Dry Rot frighten the Government Committee, who will ne theless, we trust, recognise the value of the memo dum as a whole, and take prompt action upon the practicable suggestions it embodies. Save for this flaw, the presence of which strikes us as being p liarly unfortunate, the document is distinctly valu deserving the closest and most earnest considerati

HERE AND THERE.

OSSIBLY the new curator of Sir John Soane's Museum will effect several reforms there, but by what magic he will be able to overcome the er embarrassing restrictions imposed upon him by ther foolishly drafted Act of Parliament one may venture to conjecture. I was about to say, in kneyed and thoughtless phrase, that there is room reform. But there is not, and that is the trouble. John Soane himself was greatly hampered for e, and from time to time, as his collection grew, le many additions and alterations. Further ansion would be welcome, but, in the circumstances, ns impossible. In the museum handbook it is ed that the oldest portions of the building are the ery under the dome and the adjoining lobbies; the n that is now the new picture room, which was inally Soane's private office; and the pupils' room the gallery, under which were formerly his clerks' es. It is an agreeable exercise to stand in these es and try to reconstitute the busy scene when Sir n was struggling with the enormous amount of k that was heaped upon him after he had become most prosperous architect of his day. Picture him e, in his high cravat and blue surtout, entertaining rich client with dry sherry and anecdotes of the insular War, which was still raging when, in 1812, John pulled down No. 13, Lincoln's Inn Fields, rebuilt it to his own designs, "incorporating with e gallery, etc., already built in the rear, and giving he occupation of his old home, No. 12." In 1814 ulled down and re-erected No. 14, and built at its the Hogarth room and the Monk's Parlour.

* * * *

nder the terms of the special Act of Parliament Vill. IV., cap. 4), which Sir John obtained in 1833, e can be no further expansion of the museum, ing may be added to the collection, and the ngement of the house and contents may not be necessarily" disturbed. This seems rather to tie hands of the curator, unless he can persuade the ees that there is some hitherto undiscerned virtue unnecessarily." Surely it is necessary that there ld be better accommodation for the "amateurs students in painting, sculpture, and architecture" tioned in the Act; but how to provide it seems to pretty tough problem, which, however, a little nuity may possibly solve. A liberal construction hat rather vague adverb might perhaps admit of necessary expansion without breaking faith with founder; but this is clearly a case of conscience for counsel's opinion. Common sense might gest one course, and legal interpretation its very hesis—the two things so seldom meet together mercy and truth to kiss each other.

* * * *

oane was born at Reading on September 10, 1753 d we trust that there are some who will mentally orate his birthday next Monday. If we were a less gmatic or a more sentimental race, all the Fellows Associates of the Institute who could find their there and find room inside, would assemble in the um and make pretty speeches, perhaps recite odes sonnets, go to; and those who were crowded out d stand in line in front of the stone and brick ling which harbours "infinite riches in a little ," and, at a preconcerted signal, solemnly and ltaneously take off their hats to the memory of the s founder. Which reminds me that the year-book e Institute calls itself a Kalendar, and does not se the title, inasmuch as it enshrines no sainted ories of its benefactors or its martyrs, or its men ty of achievement in peace and war, but fobs us ith such romantic entries as "General Meeting (Ordinary)," "Practical Standing Committee," "Preliminary Examination," and the like thrilling adventures. When it is resuscitated, call it not a Kalendar unless it is embellished with the birth dates and death dates of noble builders, and the dates and fates of notable buildings. True this alleged Kalendar records fitfully and sporadically who won the Soane and who the Tite, who was the President in such a year, and who the gold-medallist: yet this is but a cold chronicle of inevitable events—a referendum, not a commemoration. It must have been by way of violent recoil from this deadly prosaic Kalendar that Mr. W. J. Locke turned romanticist. "Brighten up the Institute meetings." Brighten up the Kalendar!

* * * *

It shall then be recorded in the Kalendar that Soane died at his house, No. 13, Lincoln's Inn Fields, on January 20, 1837; that he was elected an Associate of the Royal Academy in 1795, R.A. in 1802, Professor of Architecture in 1806; that he was knighted in 1831; that he obtained his Act for establishing and endowing his museum in 1833; and that he died on January 20, 1837, the Act then coming into operation. How are we to pronounce "Soane"? Did he alter the pronunciation with the spelling? For he was born Swan, and was the son of a bricklayer, like Ben Jonson, who himself wielded the trowel in Lincoln's Inn or ere he sang of the "Swan of Avon." At first John altered his name to Soan. Did he finally add the final e in the forlorn hope of getting people to call the name "So-*ahne*," with the second syllable lengthened and stressed? Or did he seek a complete disguise that justifies us in making Soane rhyme to "bone," as most of us do? But this may chance to be a "bone" of contention; having, when all is said, but little marrow in it.

* * * *

One of the reforms not specifically statute-barred is the publication of a catalogue. No catalogue has been issued, and the neat little handbook prepared by the late Mr. Walter L. Spiers is a very inadequate substitute for a full descriptive list of the treasures housed in the museum. Its thirty-two plates are very interesting, and we should all be sorry to lose them; but I venture to doubt whether the dozen or so of reproductions of Hogarth's "Rake's Progress" and "Election" are not absolutely superfluous. Surely the space they take up could be more profitably occupied. They need not be wasted. They could be adapted as sets of postcards, which visitors to the museum would be glad to purchase. Hogarth sold "The Rake's Progress" (eight pictures) for 176 guineas, and Sir John Soane bought the series at Colonel Fullarton's sale in 1802 for 570 guineas. Garrick gave Hogarth 200 guineas for the four pictures of "The Election," and Soane acquired them for 1,650 guineas at the sale of Mrs. Garrick's effects in 1823, the auctioneer remarking, so the handbook tells us, "As returning officer I have the honour of declaring that John Soane, Esq., is the successful candidate in this warmly contested election." Rather obvious, you say; but still, not bad for an auctioneer. It is a delightful little pamphlet, that handbook: but it ought to be amplified, especially in the more purely architectural portions. And one ought not to be compelled to go to the museum to get a copy of it. The legend on the cover, "To be had at the Museum only," imposes that passionate pilgrimage. Make a complete catalogue, Mr. Bolton, putting no restrictions on its sale, and generations of art-lovers yet unborn shall rise up and call you blessed. My blessing, clear of all contingencies, is yours already.

DIOGENES.

A MACEDONIAN VILLAGE.

BY OSCAR F. TURVILL.

On entering a Macedonian village the first thing that strikes the eye is an obvious lack of system. The whole village appears to be an indiscriminate jumble of buildings. Northwards the villages are occupied by a mixed population, chiefly consisting of Greeks, Bulgarians, and Turks. It is really surprising the number of inhabitants who are capable of conversing in the three tongues. It is considered essential to acquire this facility in order to trade in any of the surrounding villages. A few people are able to speak English, French, and Spanish as well.

In choosing a site for a village the chief object appears to be to select an area containing a network of natural sunken tracks or waterways. These are to serve the purpose of roads, the higher ground being adapted for building purposes. It follows, therefore, that during the winter months several of these natural roads become streams. To overcome this difficulty most of the roads have a stepping-stone causeway down the centre. On the plain there is no lack of water supply; almost every house possesses a well, which, although not deep, is sufficient for ordinary requirements, except, perhaps, in very dry seasons, when provision is apparently made by the insertion of several main wells of a deeper and larger type. In some villages a fountain is built giving a continual flow of water. The houses in these villages are mainly built facing south-east. They are mostly of a verandahed type, with mud bricks and mud mortar for walls, and pantiles for a roof-covering. In order to keep the houses cool during the summer months the roof is constructed as follows. Canes are tacked on the rafters butting each other, and about a 2 in. layer of mud is placed on this, forming a bed for the tiles. The majority of the houses have a beaten earth floor turned up at all corners to the rendering on the walls.

A TURKISH MOSQUE.

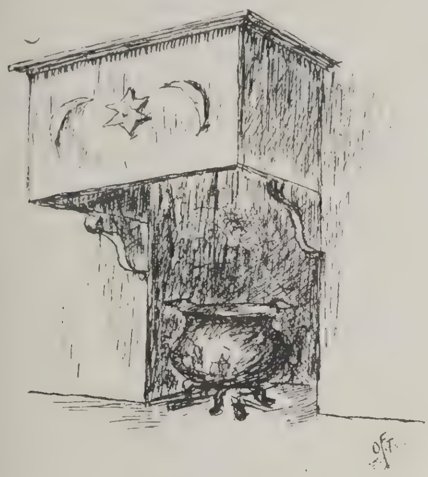
The windows are of the smallest, most having a rough window frame fitted with glass. One or tw the houses boast of a type of sliding sash, glazed, without fastenings or pulleys and weights.

GREEK ORTHODOX CHURCH IN A MACEDONIAN VILLAGE.

rior of these windows are grilled with ½ in. round bars let into the walls. In the church, school, and que the workmanship is better, the chief parts ig constructed of red bricks in lime mortar. As walls are very thick, cupboards are made in them orming a niche with a wood lintel whilst building.

he two-storied house, shown by one of the accomying sketches, has wooden floors on the ground r, and the ceilings are butt battened with a joint ld.

ireplaces are mostly of a large canopy type, the being the bottom of the fire, with a recess in the



A CANOPY FIREPLACE.

for jambs. The flues are independent and pery straight. A three-legged trivet, supporting a iron cauldron, is used for boiling purposes. Charfuel is used to a considerable extent, the heating room being by means of a large shallow brazier with charcoal and placed in the fireplace openntil all smoke is gone and then brought out to the lle of the room. Each house has a large brick outside similar to the old style of bakehouse s. Oxen wagons and pack donkeys are the means nveyance for both the people and their goods.

THE PLATES.

Architectural Ideas in War-time.

THIS is the second of a new series of plates, the purpose of which, as outlined in a short article in our last issue, is to reveal the war-time thoughts of architects who are temporarily cut off from ordinary architectural practice. The author of these brilliant perspectives is an eminent architect, who desires to remain anonymous.

Mausoleum at Brooklyn, N.Y.

The Egyptian temple type of building is singularly appropriate to a mausoleum; it has an impressive solemnity about it. In the example from Brooklyn, N.Y., illustrated in this issue, Mr. Clarence Luce has produced a remarkably dignified work, in which Egyptian *motifs* are cleverly infused with the Greek spirit.

Staircase, No. 9, Clifford Street, London.

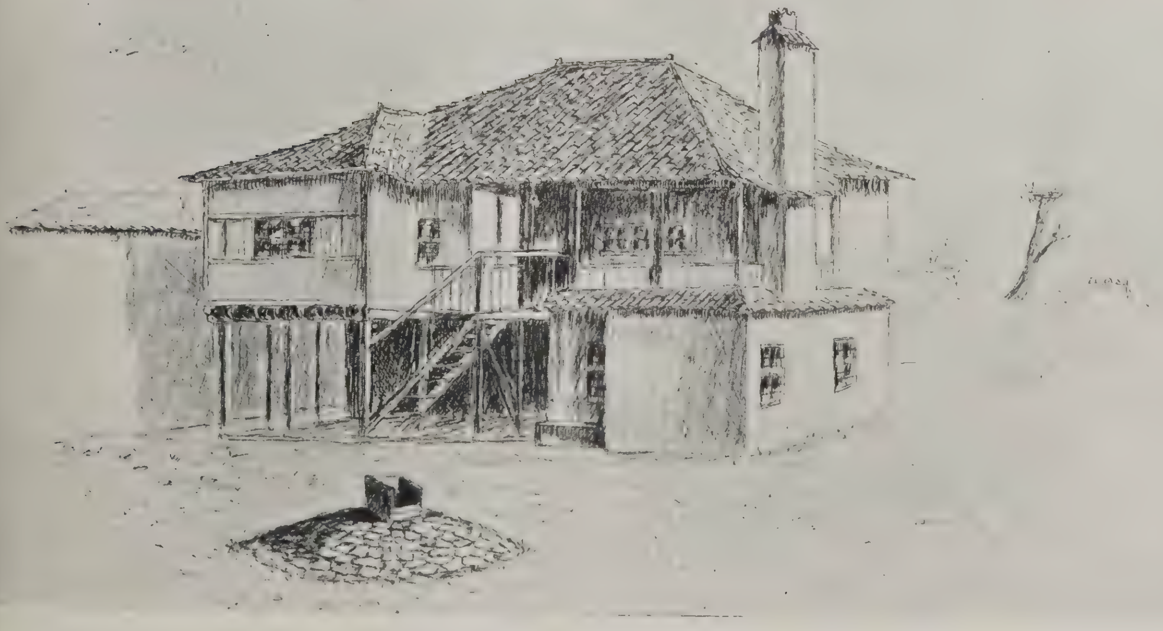
This staircase, designed it is supposed by Isaac Ware, belongs probably to the middle years of the eighteenth century, though it still has a good deal of the vigour and robustness that characterises the work of the great architects of the preceding century. It bears no relation to the contemporary work of unknown men whose light airy staircases, with their spindly balusters and delicately carved spandrels, are such delightfully characteristic features.

The St. Vincent Gate, Madrid.

Fergusson would have it that, save for Juan Villaneuva's fine Classical Museo, Madrid was almost destitute of buildings of architectural merit, and he held that Spain was among the least artistic of the nations. This gateway, with its weak pediment and feeble wings, does not, it must be confessed, do much to discredit the charge. There is, however, a certain elegance of proportion in the central feature.

Detail of Gate to the Old Clarendon Press, Oxford.

Of fine ironwork there are many examples in Oxford—the great hinge of Merton, the work of



TYPICAL HOUSE IN A MACEDONIAN VILLAGE.

Robinson at Trinity and New College, and Tijou's gates, which stand so well in the massive stonework of the portico of the old Clarendon Press. Oxford, it has been said, is the real type of a garden city—a city of big buildings, great gardens, open courts—and in such a city ironwork gates are peculiarly apt. In the vast isolation of a park they lose scale and value. Their truer function is to guard and yet display, to intrigue the passer-by with sudden revealings of quads, of glimpses of lawn and flower and tree.

"HANDS ACROSS THE SEA."

THE following letters have passed between the Royal Institute of British Architects and the American Institute of Architects:—

June 14, 1917.

To the President and Council of the American Institute of Architects,—

Gentlemen,—Probably no group of Britons has been wont to enjoy a closer bond of intimacy and mutual understanding with its corresponding group across the Atlantic than that which has so long and so happily subsisted between the architects of your great country and of ours.

For this reason, if for no other, it seems natural to us to yield to a very evident desire among our members, the desire to give expression to the cordial and affectionate satisfaction which we feel in the recent practical evidences of close community between our nations.

The world-struggle, a fight not on our side for material possessions but for the maintenance of those ideals which are the most precious heritage of man, is, as we all feel, not one in which the exponents of our art are without interest.

Architecture, the least luxurious and the most humane of the arts, can never be aloof from the deeper and worthier instincts of mankind. We feel confident, therefore, that if we, as representing in our degree the architects of Great Britain, send you at this momentous juncture a word of heartfelt international greeting you will not think that we are departing from the proper functions of a professional Institute.

Had we any doubt on this point, that doubt would be removed by our remembrance of the remarkable utterances of Mr. Cram, in October, 1914, and the comments of Mr. Clipston Sturgis on the position of England in the war, which, together with other expressions by American architects on the subject, have been very eagerly read and warmly appreciated here.

Gentlemen, the heart of England has been warmed by America's action. We British architects are not the slowest to feel that warmth; and knowing that with you, too, the pulse of national life is strong, we feel a lively satisfaction in sending to you—as architects to architects—our very cordial welcome and our acknowledgment of profound pleasure in this union of the already kindred races.

In conclusion, we would beg that, so far as it may be practicable, you will regard this message of ours as a message to the general body of architects in the United States.

With renewed expressions of brotherly goodwill,

We are, Gentlemen,
Yours very faithfully,
Ernest Newton, President.
Henry T. Hare, President-Elect.
Paul Waterhouse, Vice-President.
E. Guy Dawber, Hon. Secretary.

The following reply has been received from the American Institute:—

The Octagon, Washington, D.C., July 12, 1917.

To the President and Council of the Royal Institute of British Architects,—

Gentlemen,—True it is that the exponents of our
art, as represented by the Royal Institute of Br
Architects on the one side of the Atlantic and by
American Institute of Architects on the other,
happily enjoyed that very real understanding and
close bond of intimacy which spring from a unit
purpose and of ideals.

At the moment when our country has announce
the world, and especially to our autocratic enemy
common interest with your great country and
other Allies, your warm welcome is deeply apprecia

Through the long months and years of your
sacrificing struggle, when the words and acts of
of our profession betokened a sympathy which of
neutrality could not stifle, our hearts have bled
alone for the lives so freely given of the yout
promise in our profession but for the wanton des
tion of those monuments of our art which age
tradition have made our common heritage.

And through these months of the duration of
war for the maintenance of those ideals which ma
the world a worthy and happy dwelling-place for
we have longed for the striking of that inevitable
when we might stand shoulder to shoulder, brothe
arms as well as brothers in art, while our country,
to anger, perhaps, but flaming at its core with a
ing conviction of the righteousness of our com
purpose, might throw its pent-up energy into the
which threatened the liberties of the civilised worl

And so to you, Gentlemen of the Royal Institu
British Architects, greeting and heartfelt appreci
of the impulse which prompted your ringing wor
welcome, and with our greeting comes a reciproca
impulse to extend our eager hands to you acros
sea which no longer separates us.

With renewed thanks for your message of wel
into the true brotherhood of man, we are,

Yours very faithfully,
John Lawrence Mauran, Preside
William Stanley Parker, Secreta

The Council have offered the hospitality o
Institute to American architects on service who
themselves on this side of the Atlantic and
convenient reach of London, and have extend
them certain privileges of membership, such as th
of the Institute premises and library and attenda
meetings and other functions. They are also
the opportunity of borrowing books from the
Collection. It is hoped that members of the Ins
coming in contact with American architects will
this offer known to them.

CORRESPONDENCE.

New Materials and Methods as Influencing D

To the Editors of THE ARCHITECTS' AND BUIL
JOURNAL.

Sirs,—I have just received the July number
Journal of the Royal Institute of British Archite
which is published a discussion under the above
ing. Many most ingenious modern method
building were mentioned, probably the greatest
vations being the use of waterproofed cement
in a rendering or in concrete.

When the British Government erects hundre
houses with 2⅝ in. porous coke breeze slab
depends upon a ¾ in. waterproofed renderi
exclude inclement weather, such an entirely
method of building should be given close consider
The walls of these cottages were formed of piers
supported the roof, and the 2⅝ in. curtain walls
placed between the piers. An architect who re
superintended the dismantling of a factory buil
these slabs told me that the tenacity of the slab
was remarkable, and he was convinced that this
and pier" construction, combined with a flat c

f, would be the standard cottage owing to the rcity of freightage for bringing foreign timber to s country after the war.

Mr. Thos. Potter, the author of the standard work oncrete," wrote me recently that he had built many ncrete cottages with flat roofs, and he finds that tside walls 9 in. thick and inside partitions 3 in. thick ll safely carry a floor or roof of 4½ in. up to 15 ft. by ft. They can be strengthened at a slight additional st by forming brackets under the concrete where it ns the walls.

Although Mr. Potter has never heard of condensa- n under such roofs, I am sure it will be necessary, pecially in wet climates like Ireland and Wales, to m them with a bottom layer of porous aggregate, 1 in. or so of coke breeze concrete; or the whole ncrete could be of a porous aggregate, and then ished with 1½ in. of fine concrete, waterproofed.

Another new method of construction in England is e uncased concrete dome. The former British thod of building a dome was to construct it of stone, if of wood, to cover it with copper, zinc, or lead. e City Architect of Manchester was probably the st well-known architect to employ Pudloed cement a concrete dome. I refer to the dome on the Free brary at Chorlton-cum-Hardy. In close proximity a similar dome on Chadderton Town Hall, designed Messrs. Taylor and Simister.

It will appeal to your readers that as these buildings ve been erected a sufficient number of years to prove ir stability and weather-resisting qualities, there are eat possibilities in the use of concrete domes and ilar hitherto expensive structures.

The use of a plastic material like concrete appeals to ny minds, and I shall be happy to give particulars of re novel uses of waterproofed cement to any reader o may be interested.

J. H. KERNER-GREENWOOD.

King's Lynn.

"BETTER HOUSES FOR ALL."

DDRESSING a meeting at the Conservative Club, Portobello, Mr. G. W. Currie, M.P. for Leith, said that of all the reconstruction problems ead, none could exceed in importance the work of onstructing houses. The slums of large towns were accursed inheritance from the backwash of the lustrial revolution of a hundred years ago and the ctrine of the Manchester School that cheap wages, eap men, cheap women were "the one thing need- ." Give a man decent wages, and in thirty years the using problem in manufacturing centres would ve itself.

In his view the owners of all questionable house pro- ty should be put strictly on their notice that higher ndards would be required. The thing could only be ne in stages. Thus, within two years of the end of r all property still below Standard A should be en possession of by the authorities. Seven years er Standard B and fourteen years later Standard C ght be enforced. Default in any one of these stan- ds might fairly be regarded as proof that no legiti- te and substantial interest in the property really nained with an owner. The question of compensa- n did not arise on such a footing.

This policy, given wages at a decent rate, was not at impracticable, and it would result within thirty years the provision of housing on an economic basis. uses provided at low rents while wages were right- themselves and slums were being routed out were ustifiable expedient, and he was prepared to vote for m, because otherwise he would have to wait far too g to get them in any other way.

But let no one imagine that a hundred millions of ney spent in this way did not mean a burden of five six millions sterling a year upon the industry of the country. But increased efficiency and increased moral stability were apt to go hand in hand, and he was prepared to advocate heavy taxation for the next thirty years as a wise and warrantable investment on the part of those upon whom the bulk of it would primarily be placed.

Slum conditions were morally wrong, and therefore, to use Mr. Gladstone's argument, they could not be politically right. The Black Watch was recruited in part from slums in Dundee and the Highland Light Infantry from slums in Glasgow which simply would not stand investigation.

THE PROPOSED BUILDERS' PARLIAMENT.

IT is remarkable with what unanimity the Press has commended principles embodied in the scheme for a Builders' Parliament which was recently approved by the National Federation and the representatives of the chief trade unions connected with the building industry. A conspicuous instance is that of an able writer in the "Manchester Guardian," who thus summarises some of the details of what he describes as "the interesting scheme now on foot for creating a national industrial parliament in the building trade": "The idea of forming national councils in the great industries, through which both employers and workmen shall co-operate in a common policy for the improvement of the industry from within, is very much in the air at present. Important suggestions on these lines were made by the Whitley Committee, and the report of that Committee is now being discussed by the leaders in the big trades. The builders' proposal, which took shape at a joint conference of the employers' and workmen's associations held in London recently, is much the most definite step yet taken. It is based on the belief that the hope of preventing industrial warfare lies in bringing about co-operation between management and labour, not for the negative purpose of adjusting differences but for the positive end of promoting the progressive improvement of their industrial service.

"The circular which has been sent to the trade points out that the scheme strikes a new line of administrative devolution—devolution by occupation as compared with devolution by geographical area. In future the industry would itself agree to its conditions and then submit them to the Government for approval and sanction, and thus relieve the House of Commons of controversial work. Instead of industrial legislation being imposed from without in the face of strong opposition from the interested parties, there would be an agreed policy of reforms for which the industry would bargain with the Government.

"The Builders' Parliament would not concern itself with the settlement of disputes, but with such matters as the regularisation of wages, the prevention of unemployment, the improvement of technical training in the trade, and, generally, would be a clearing-house for ideas in everything concerned with the welfare of the industry. Through its committees of inquiry the Parliament would work out two codes—one compulsory, probably involving legal sanction of agreed minimum standards, and one voluntary, which would be adopted by the more progressive employers. Legal sanction for the compulsory code might be obtained by a special Act of Parliament giving power to Government Departments to ratify the decisions of Parliament and to apply them to the whole of the industry. Under the present system of separate and often antagonistic interests there is no recognised body with which the Government can deal in regard to matters concerning the industry as a whole. The plan seems to be full of interesting and valuable possibilities."

WAR · BVILDINGS · SECTION.

THE DESIGN AND CONSTRUCTION OF MODERN INDUSTRIAL BUILDING.

BY M. GOLDENBERG, Assoc.M.Am.Soc.C.E.

THERE is probably no part of a modern industrial institution, machinery and equipment not excepted, towards the improvement of which a little extra investment will bring such enormous returns as its buildings. It is indeed difficult to estimate accurately in pounds, shillings and pence the amount annually saved or earned to an institution as a result of improved modern buildings. That the earning power of such buildings is a fact is sufficient to have warranted many farsighted manufacturers, with reputations for business acumen, in putting time, thought and money into their new buildings. Money alone is not sufficient. The thought and the experience of experts is another desirable investment.

Formerly, when a manufacturer needed a foundry or a machine shop, he instructed some local builder to construct for him a roof and four walls pierced here and there with windows and doors. Of course he thought it was good enough.

To-day, the successful manufacturer (and this is one reason for his success) visits the best and most representative plants, interviews owners and builders, consults with engineers and experts, and finally selects a man of wide experience and specialised ability to design his buildings. In this way he profits by the experience of others. He improves over the best that has gone before. He provides for his institution a building basis from which it is economically possible to modernise other factors of his plant and equipment. Without the correct building no further efficiency schemes can be put into perfect operation. The first essential is the right kind and design of building.

An industrial building must provide a working area properly protected against the elements, including fire, and with as much daylight as possible. This working area must be so shaped and arranged as to assist in the use of the building, to take fullest advantage of the land, and to provide the maximum economy consistent with the best results.

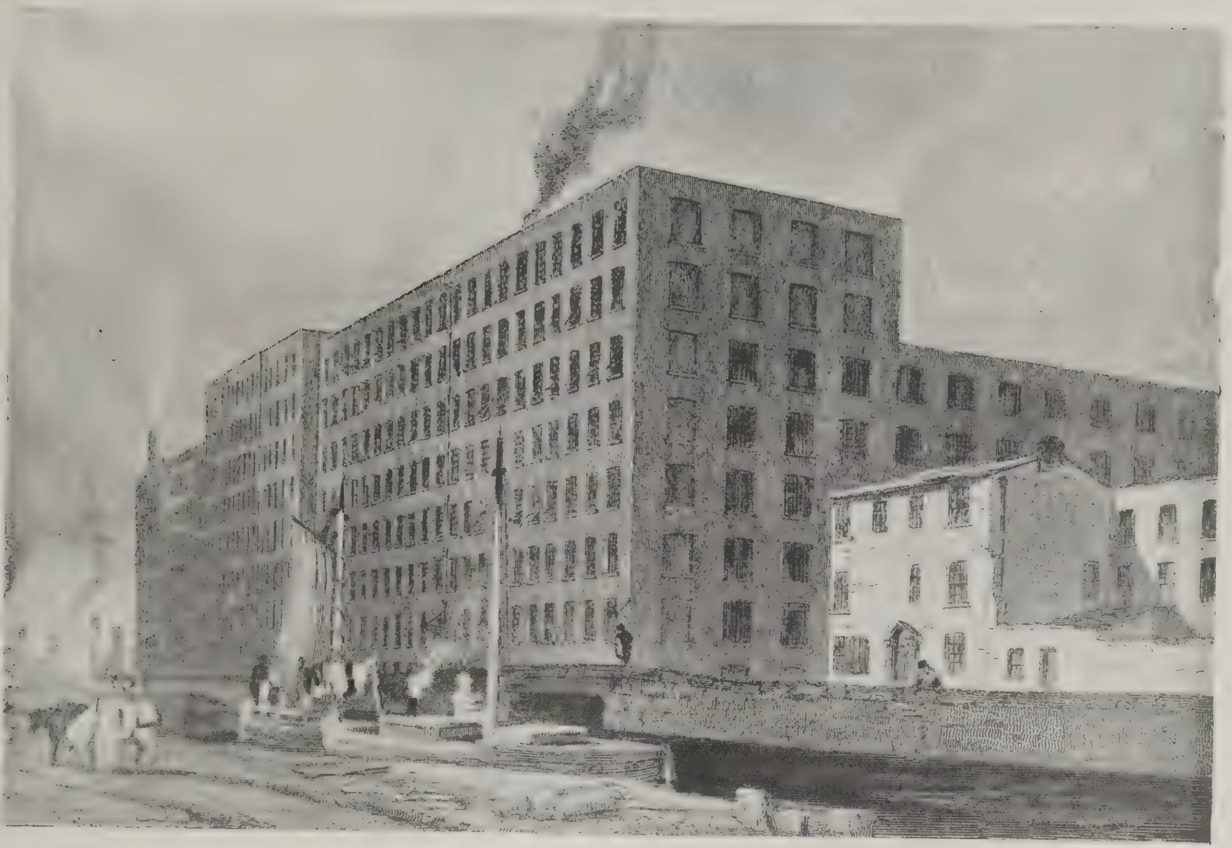
How absurd was the old type of single-storey building, composed of heavy solid brick walls with just a few small openings! To be sure, it kept out the rain, but it also shut out the light and the fresh air, which are some of the much needed and valuable requirement in any building in which work is done. Suppose an annual pay-roll to be £20,000, housed in a building whose original cost was £5,000 to £10,000. It is reasonable that, with perfect light and ventilation, efficiency of labour can be increased 10 per cent., say £2,000 saving per year. In only a few years this saving alone would pay for the building.

How reckless and extravagant, therefore, is the manufacturer who, when he buys his modern steel sash, economises by a few pounds and jeopardizes his chances of securing this immense annual saving! Assume this sash will cost an average of £700. If an extra £100 would add permanncy to the sash, make it more weathertight, or give better ventilation, where else could such £100 be better spent? Steel sash transforms the old, dingy, dark shop into a modern, light, healthy and efficient factory. Manufacturers should buy quality, and be willing to pay for it.

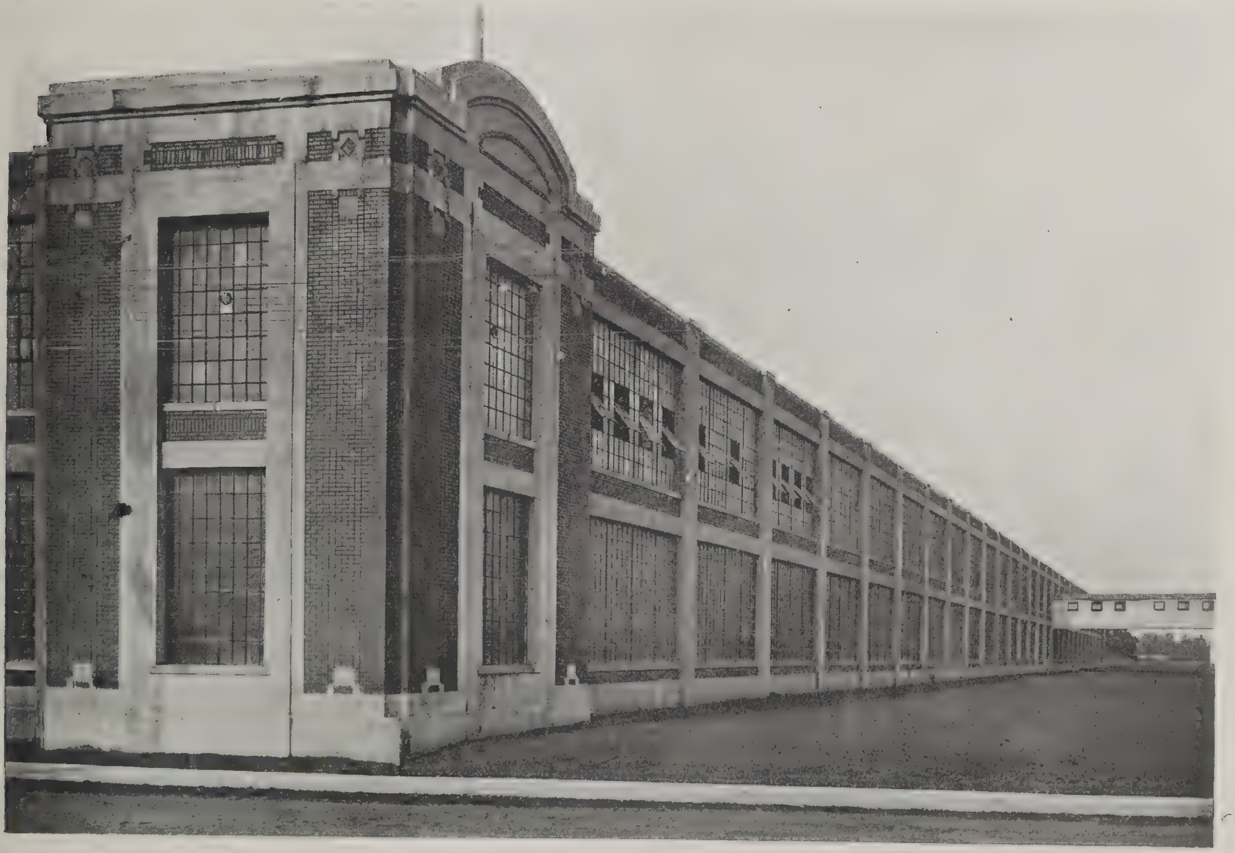
Consider for a moment the effect of light on industrial accidents. It will help one to realise the important financial advantage of daylight in a factory building. In an address delivered at Yale University by Ferdinand C. Schwedtman, representing the National Association of Manufacturers, there appears the following:—

"From the chart derived from fatal dustrial accidents in 80,000 plants, tending over a period of three years, will be seen that the greatest number accidents occur during the winter mon or during a time of the least amount natural light. Every effort should made to provide properly lighted work places, which is now made possible, to improvements in lighting systems ma within the past few years. Nothing demoralise a department or shop m than an accident, and an important s in the right direction is providing ple of good light, daylight preferred. G light is especially essential around w working machinery or at punch press where the safety of the fingers depends the operator seeing properly at all time"

Referring to the building itself, the fi essential is the position and arrangem of supports so that they may prove economy and, at the same time, ordinate with the use of the building a therefore, instead of being an obstructi form a material aid in supportng shaft and performing other functions. T type of construction to be used foll naturally from the position of supports. Long span, single-storey bu ings should have structural steel truss If the spans are shorter, reinforced c crete may be used with better results greater economy. In any case, the r slab itself should be made fireproof. T character of this roof slab plays a very portant part in building construction. made of wood it becomes very dirty gathers dust, which is only shaken d again on to delicate machinery. One hardly conceive of a worse material fo roof slab than wood. The ideal mate is concrete, in the form of a thin sl as this provides the necessary f proofness together with the minim dead weight to be carried. Such a s



An Early Type of English Factory Building. Note Heavy Brick Walls and Insufficient Window Area.



A Modern Type of Reinforced Concrete Factory Building. Note Large Window Area and Excellence of Architectural Treatment.

THE OLD AND THE NEW: A COMPARISON.

has a good appearance, it is permanent and economical. It can be made perfectly watertight by means of one or other of the well-known brands of weatherproofing preparations. It is extremely inadvisable to depend upon the watertightness of concrete, whether placed monolithically or in the form of tiles.

Much has been said about condensation in factory roofs. If on account of the contents of the building and the use to which it is put there is maintained a high degree of humidity, it is almost impossible to prevent condensation, unless the roof is made to act as a perfect insulator. As far as the ordinary types of fireproof construction are concerned, one is about as good as the other in resisting condensation. A 2-in. solid concrete slab is about as good as a 4-in. combination terra-cotta tile. Condensation is due more to the high degree of humidity in the building than to any extreme variation in temperature between the inside and the outside of the building.

The finish of the floor that rests on the ground is of extreme importance, but is usually determined by the character of the building and its use. The problem that usually confronts an owner is whether to use a plain cement finish or a wood finish. It is claimed that cement finish is damp and hard on workmen's feet, that it very easily chips tools that are dropped, and also causes a certain amount of dust. All these contentions are more or less true, but the dusting can be eliminated by using a proper grade of floor enamel, or special hardening material in the concrete. Cement finished floors represent a substantial saving, and have been successfully used by many manufacturers.

The shape of the roof in a one-storey building is another very common problem, especially where light and ventilation from the top are desired. There are innumerable types of monitors, as well as saw-tooth arrangements. There are places where both plans may be used to advantage. As a rule, saw-tooth construction is considerablv more costly than a monitor roof. The only object of saw-tooth construction is to obtain a uniform shadowless north light. This is particularly advisable in buildings housing delicate machinery requiring careful workmanship. Its additional expense is hardly warranted elsewhere. A monitor roof is hardly advisable except where top ventilation is necessary, or the building is of such an area that it cannot be lighted from the sides. In such an event the greatest care should be used in the selection of the proper sash for the monitor and its method of operation. A single-storey building 14 ft. or more in height and up to 90 ft. in width, may be successfully lighted from the sides alone, provided the proper style and arrangement of steel sash is used.

In modern factory buildings there is very little actual wall space, the large glass areas and skeleton form of construction making walls unnecessary, except as a partition separating the inside from the outside. As they carry no load, these walls may be made as thin as consistent with good judgment. Occasionally walls must resist side blows. In such an event they should be made sufficiently strong. Ordinarily a 2-in. solid concrete wall will prove efficent, and it is certainly very economical. In such an event all openings, such as for doors, should be provided with a special steel frame.

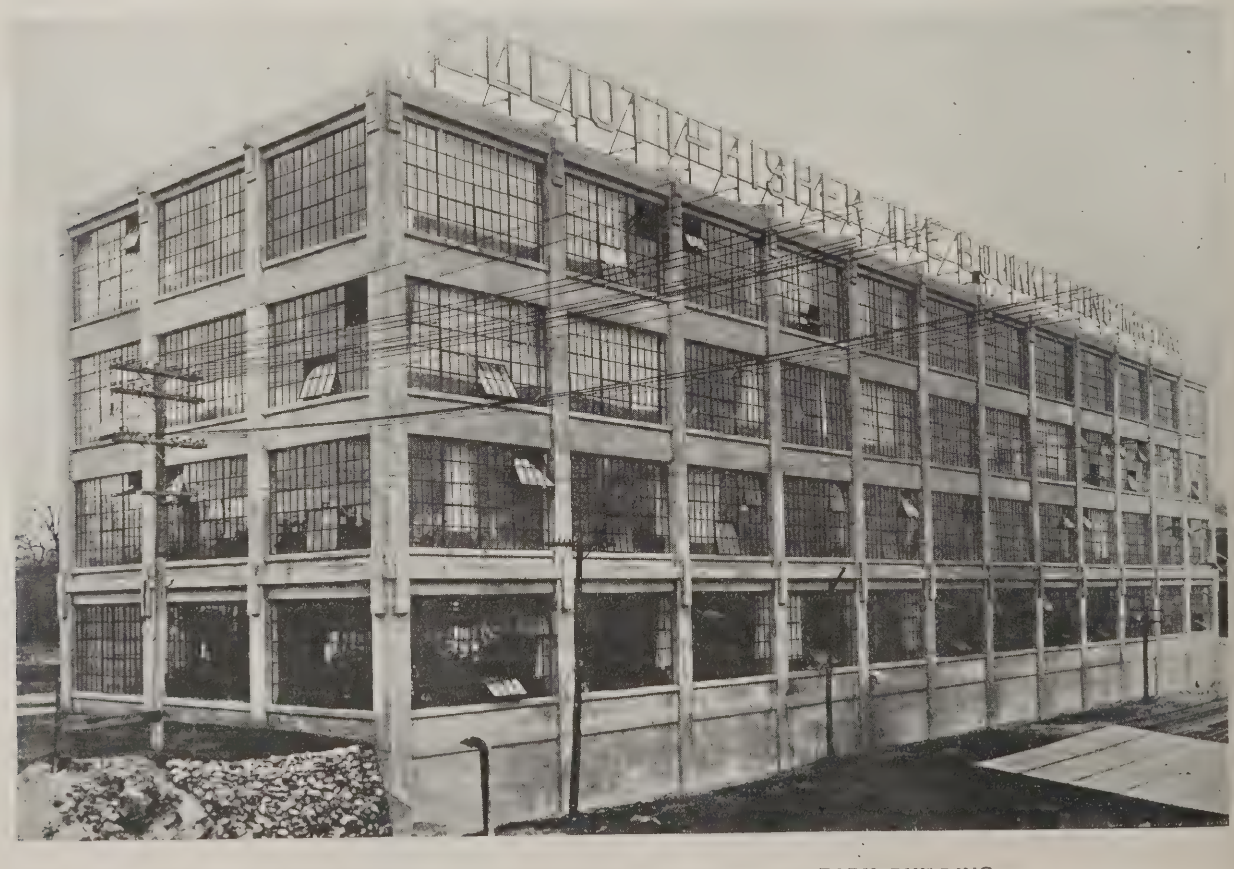
The illustrations to this article, which is reproduced by kind permission of "Kahncrete Engineering," shows some modern types of industrial buildings in which the specially noteworthy points are the large amount of light and ventilation obtainable, and the arrangement of the construction so that it not only forms a protection against the elements but definitely conforms to the particular uses which the building is put—the buildi themselves, in fact, are designed to w in conjunction with the equipment. Th are all Model Daylight Factories, erec entirely on the Kahn System of Re forced Concrete.

THE PROBLEM OF DRY RO R.I.B.A. MEMORANDUM TO GOVERNMENT.

In the last R.I.B.A. Annual Rep mention was made of the Research Co mittee which the Council had appoin to act with the Government Advis Committee on Scientific and Indust Research and various other bod engaged in research work for the inve gation of problems requiring solution regard to the use of building materi One of the most important subjects ta up by the R.I.B.A. Committee is that Timber in Relation to Decay and Pre vation, and the Government Resea Committee having invited their sugg tions, the Committee drew up and s mitted to them a memorandum urg that a liberal grant should be voted the purpose of research into the Ca and Prevention of Dry Rot in Timber, the following grounds:—

I. Danger to Life.—Dry rot destroys fibres of the timber, with the result t the stability of buildings in which dry has occurred is often endangered.

II. Annual Loss.—The annual both to the private individual and community is very considerable. It is possible to indicate the actual amount such loss, as no statistics are availa but it is unquestionable from the num of cases annually reported by archit that the disease is very prevalent, that an enormous number of buildi



A MODERN TYPE OF REINFORCED CONCRETE FACTORY BUILDING.

ughout the country are infected with rot in some form or other.

I. Reasons for Increase in Prevalence ry Rot.—A very large proportion of "constructional" (as opposed to orative") timber used in this country nported from Norway, Sweden, and ia, and owing in great part to the tion of the more favourably situated ts a greater amount of immature, , and otherwise unsuitable timber has imported during the last few years formerly.

is unsuitable timber is much more e to the attack of the dry rot fungus timber of better quality.

rther, as the disease is contagious, it ry probable that the ships used for ing timber may be infected from a of diseased timber and communicate successive loads otherwise sound.

fection of sound timber may also r in timber yards in this country.

Amount of Saving Resulting from arch.—As it is impossible to state any accuracy the annual loss result- from the disease, so it is impossible dicate what saving would be effected.

unquestionable, however, that the ey spent on research work would be d to the community in a very few owing to the saving of timber.

Scheme of Research.—A definite led scheme of research would cover ollowing points among others:—

Investigation as to how many kinds y rot exist, their characteristics, and onditions determining their infection growth.

Investigation as to whether dry rot ccur in the living tree, and if so,

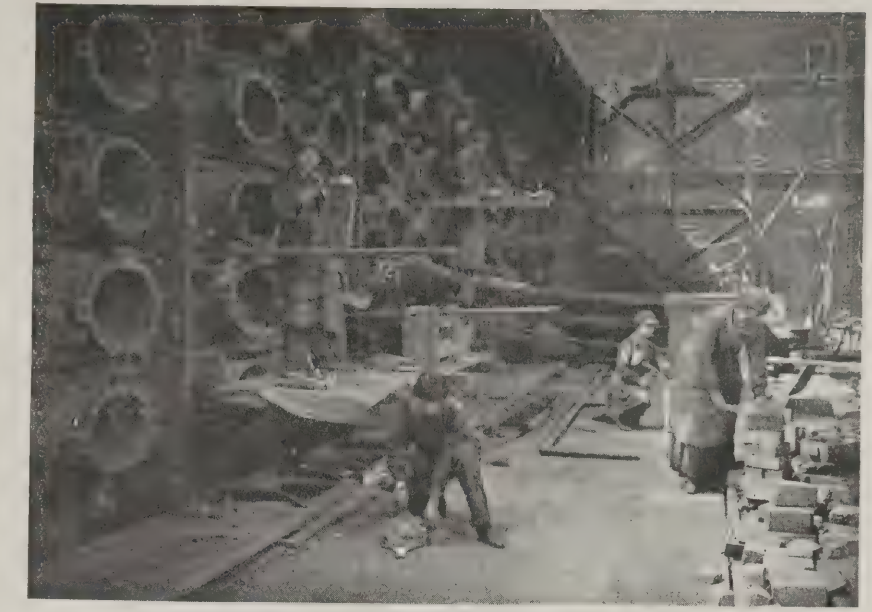
What can be done to cure the se.

What can be done to inoculate the against the disease.

Whether it is possible for one tree fect another in the forest.

Investigation into the efficacy of us antiseptics, including various ods of treatment, as regards the pre- on, destruction, elimination, incuba- and growth of fungus, commer- ost being considered as well as toxic rties.

Discovery of suitable new antisep-



WOMEN BRICKLAYERS IN A GASWORKS.

(See next page.)

(5) Investigation into what extent natural or artificial drying or seasoning of timber is effective in killing, reducing, or preventing the disease.

(6) Investigation into the length of time that the spores of the disease can remain latent in the timber awaiting a suitable environment for recrudescence.

(7) Investigation into what extent the spores of the disease can pass through the pores of concrete, brick, stone, etc.

(8) The effect of environment and soil in producing timber having a susceptibility towards dry rot.

(9) Investigation into the effect of temperature on the life of the spores.

(10) Investigation into the methods of transmission of dry rot, and the possibility of sound timber becoming infected in the holds of ships in transit.

VI. Locality of Research Centre and Scope of Work.—It is suggested that research and investigation into the matters above-mentioned—with the exception of those actually concerned with the living tree—could most suitably be carried out at an Institute specifically founded for the investigation of dry rot, preferably working in conjunction with, or attached to, an existing institution already possessing technical experts in these subjects. It may be mentioned that such an Institute has been founded in Germany, and endowed with proper buildings and equipment.

It would be advisable for such an Institute to have its own separate and independent governing body, which should be largely composed of practical men.

Such an Institute should work in fullest collaboration with the Board of Agriculture and Fisheries, the Board of Trade, H.M. Department of Woods and Forests, H.M. Office of Works, and the Imperial Institute; and should be in constant touch with the various professional associations such as the Royal Institute of British Architects, the Surveyors' Institution, the Institute of Builders, etc.

Such an Institute should have its literary-extracting department, where a complete record should be kept of the various books, pamphlets, lectures, etc., both in English and in foreign languages, on the subject of dry rot. In fact, one of its first duties might usefully be the translation into English (and a "digest" therefrom) of such a standard work as exists in the German language as "Hausschwamm Forschungen" (published by Gustav Fischer at Jena, 1907-13, and edited by Professor Dr. A. Möller, in six or seven volumes).

It should also have its publicity department, where the results of its researches, incorporated with the knowledge obtained from foreign publications and from research work in foreign countries, might be periodically issued. In fact, the issue of a monograph from time to time on the knowledge obtained up to date appears to be the natural sequence of the research, and one of its most useful and important functions. For this reason, as well as for others, the scope of the research scheme should be permanent. It is considered that it will take many years before the subject is sufficiently well understood to ensure that the evil may eventually be eradicated.

The cost of founding an Institute on the

WOMEN DISCHARGING OXIDE PURIFIER IN A GASWORKS.

(See next page.)

above lines and the annual grant required to carry on the work, would be matters for further consideration if the Government Advisory Committee approve of the suggestions above put forward.

R.I.B.A. EXAMINATION RESULTS.

The Intermediate Examination.

The Intermediate Examination, qualifying for registration as Student R.I.B.A., was held in London from June 1 to June 8. Of the six candidates examined, three passed and three were relegated. The passed candidates, who have been registered as Students, are as follows, the names being given in order of merit:—

Gunston, E. L., Reading.
Waddicar, A., Bolton.
Clark, R. J. B., Penzance.

Exemptions from the Intermediate.

The following Probationers, having produced satisfactory evidence of their training and qualifications, were exempted from sitting for the Intermediate examination and have been registered as Students:—

Butterworth, H., Blackpool. (Manchester University.)
Byrom, R., Bury. (School of Art, Manchester.)
Chaudhuri, A. K., London. (Architectural Association.)
Dhupkar, J. J., Bombay. (Sir J. J. School of Art, Bombay.)
Gregory, H., Ben Rhydding, Yorks.
Holt, F., New Brighton, Cheshire.
Hudson, Lieutenant P. S., Chelsea.
Jennings, G. S., Moseley. (Birmingham Municipal School of Art.)
Kelly, M. R., Belfast. (University of Liverpool.)
McMichael, A. M., Callander. (Glasgow School of Architecture.)
Mason, H. C., Ambleside. (Liverpool University.)
Mountain, A. H., Newport, Mon.
Padget, M. W., Newport, Mon. (Newport Technical Institute.)
Potdar, V. C., Bombay. (Bombay School of Art.)
Priest, A. L., Cardiff. (Cardiff Technical College.)
Reixa, F., Chiswick. (Architectural Association.)
Remnant, E. A., Anerley, S.E. (L.C.C. School of Building.)
Sao, S. S., Bombay. (Bombay School of Art.)
Seervai, J. F., Bombay
Teasdale, J. S., Charlwood, Surrey.
Tubbs, G. B., Cadogan Square, S.W. (Architectural Association.)
Woodhouse, F. P. M., Wimbledon Park. (Architectural Association.)
Yardley, J. H., Stourbridge. (Malvern College, Worcester.)

The following Probationers serving with the Forces who are eligible for the Intermediate Examination and whose Testimonies of Study have been approved, have also been exempted:—

Athron, T. S., Doncaster. (Royal Fusiliers.)
Bailey, C. H., Mansfield, Notts. (Royal Engineers.)
Burford, J., Blackheath. (Artists' Rifles.)
Evans, E. E., Liverpool.
Ferguson, J. S. (Royal Engineers.)
Haywood, A. A. N., Mayfair, W. (R.N.V.R.).
Lawrence, H. M., Tamworth.
Lawson, E. M., Chester-le-Street, Durham. (R.N.D.)

SCREENING COKE BREEZE IN A GASWORKS.

The Final and Special Examinations.

The Final and Special Examinations, qualifying for candidature as Associate R.I.B.A., were held in London from June 21 to June 29. Of the thirteen candidates admitted, four passed, and the remaining nine were relegated. The successful candidates are as follows:—

Beeston, H. A., Cairo.
Henriques, E. C., London, S.W.
Rayson, T., Tottenham.
Stainsby, G. P., Durham.

THE COMMITTEE ON WAR DAMAGE AND THE CHURCHES.

Members of the Committee on War Damage have entertained representatives of the National and other Churches to breakfast and conference with them at the Charing Cross Hotel, Mr. Mark H. Judge, chairman of the committee, presiding. On the motion of Sir Robert H. Rogers, the following resolution was passed:—"That the representatives of the churches invited to this conference be requested to sign a letter addressed to the Prime Minister in appreciation of the pronouncement he made on July 13 last in his reply to the deputation from the Committee on War Damage." The following letter was then read by the Vicar of Margate, and resolved on:—"August 1917. To the Right Hon. David Lloyd George, M.P., Prime Minister. Dear Sir,—A desire having been expressed by the Committee on War Damage that we should convey to you our sense of the pronouncement you made on July 13 last, when replying to their deputation, we have pleasure in bearing testimony to the great satisfaction your speech on that occasion has given to thousands of your civilian fellow-countrymen who have been victims of air raids and bombardment. Your acceptance, on behalf of the Government, of the principle of Government responsibility to make this war damage good out of national funds, in like manner as local authorities make damage caused by riots good out of municipal funds, has further satisfied the moral sense of the community. We rejoice, therefore, that the sufferers will r relief, and that heart will be put int whole people by the adoption of a hu and just policy, which has been re with such universal approval th know of no single adverse criticism we congratulate you on being the m of so just and beneficent a measu reform."

NEWS ITEMS.

The Scarcity of Wood Paving

We are informed that the Metrop Electric Tramways Company, unable to obtain wood paving, is rel its tracks in several of the L boroughs with Lithofalt asphalte b as supplied by the Limmer and Tri Lake Asphalte Co., Ltd.

Building Without Licence.

Fines amounting to £115 have imposed by the Birkenhead Bench a firm of builders, an architect, an proprietors of a picture house for h erected a building at a cost exce £500 without a licence from the Mi of Munitions. Defendants had con a motor garage into a picture house it was alleged, in spite of orders Munitions inspector to stop, they pleted the work and opened the p house.

Midland Centre of the Federati

In the annual report of the Mi Centre of the National Federati Building Trades Employers of Britain and Ireland, it is stated that, from the erection or extension of fac or workshops required for war wo two or three towns, there has been little activity in the industry. Th normal conditions in regard to labou materials mentioned in the last a report have continued in an inten form, and there seems to be no rea spect of improvement in the state trade until the war is over. Alth only two actual stoppages of work been reported, there has been con able labour unrest during the year, cially on account of the increased c living. The report adds that war bo have been granted in many towns, i dition to increases of wages.

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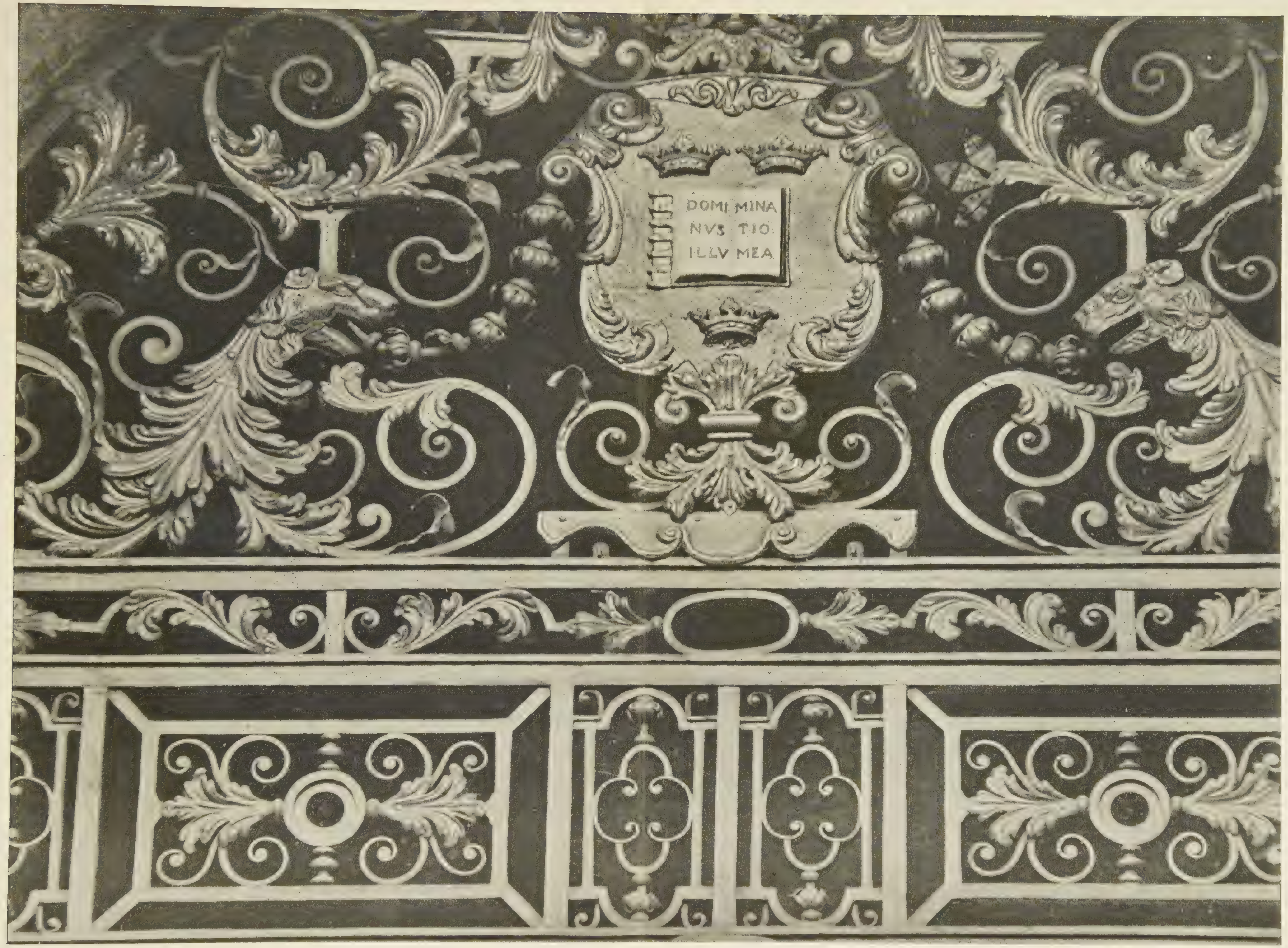
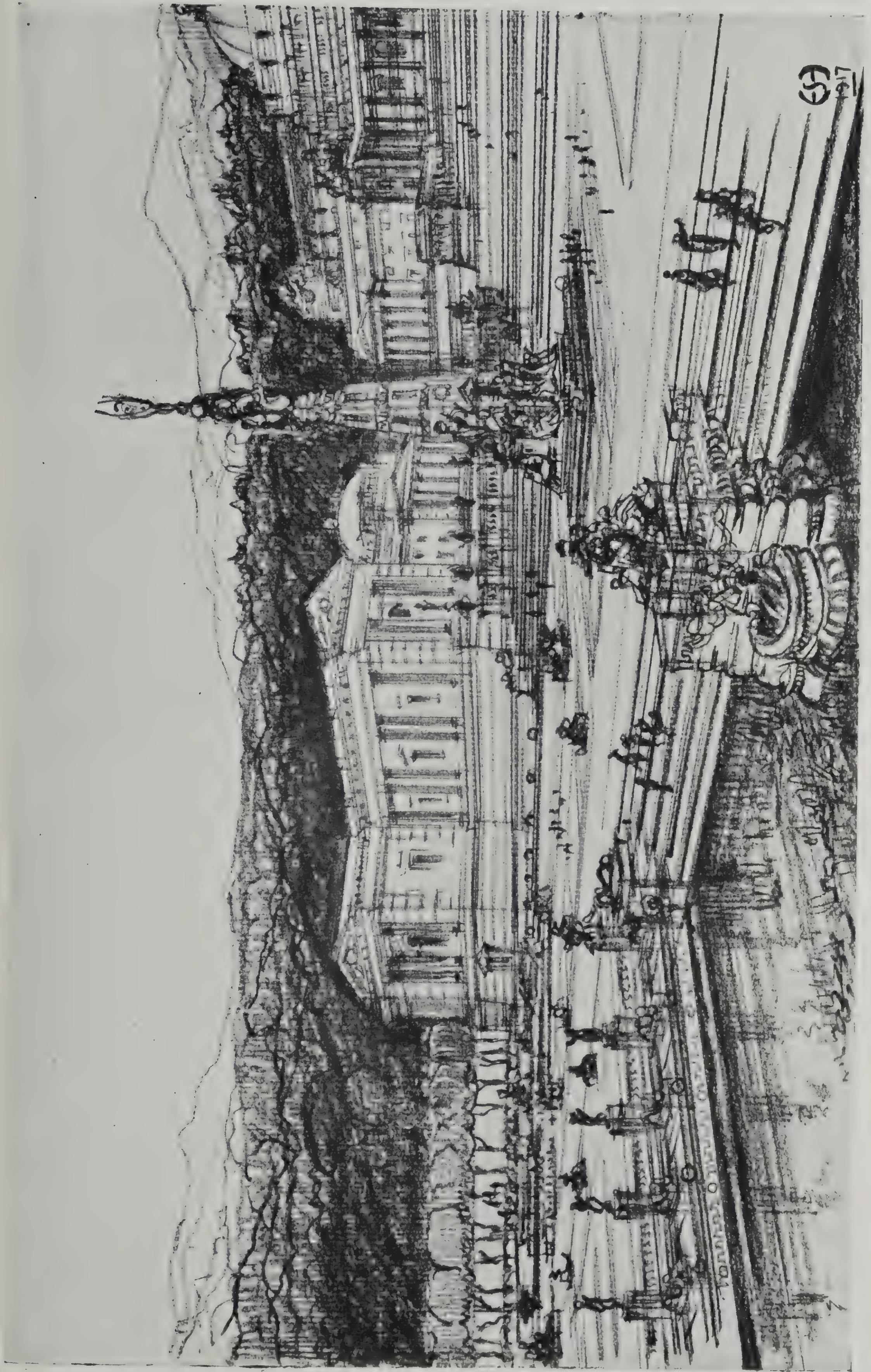
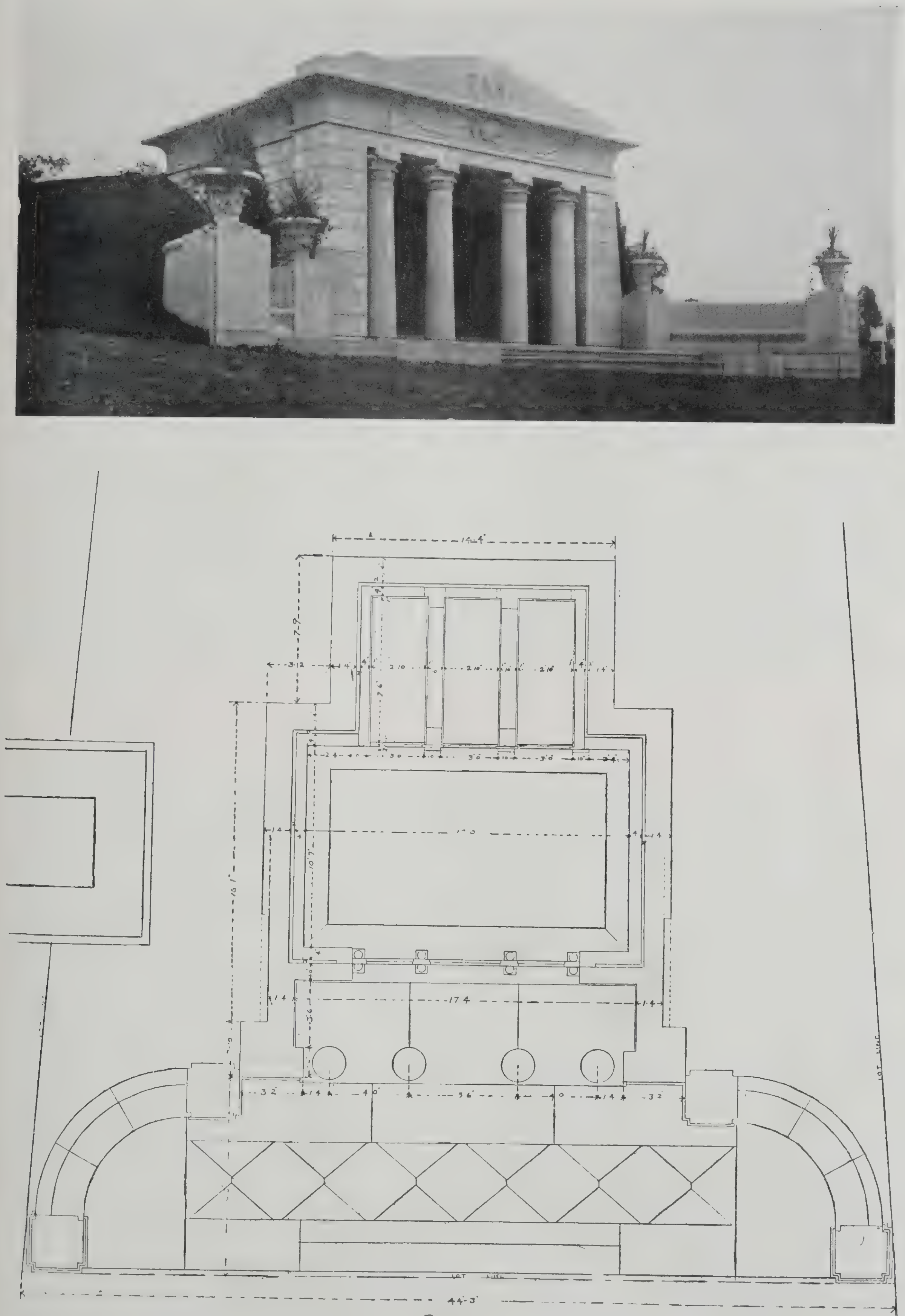


DETAILS OF CRAFTSMANSHIP (SERIES II.). XXXVIII.—DETAIL OF UPPER PART OF GATE TO THE OLD CLARENDON PRESS, OXFORD.
BY JEAN TIJOU.



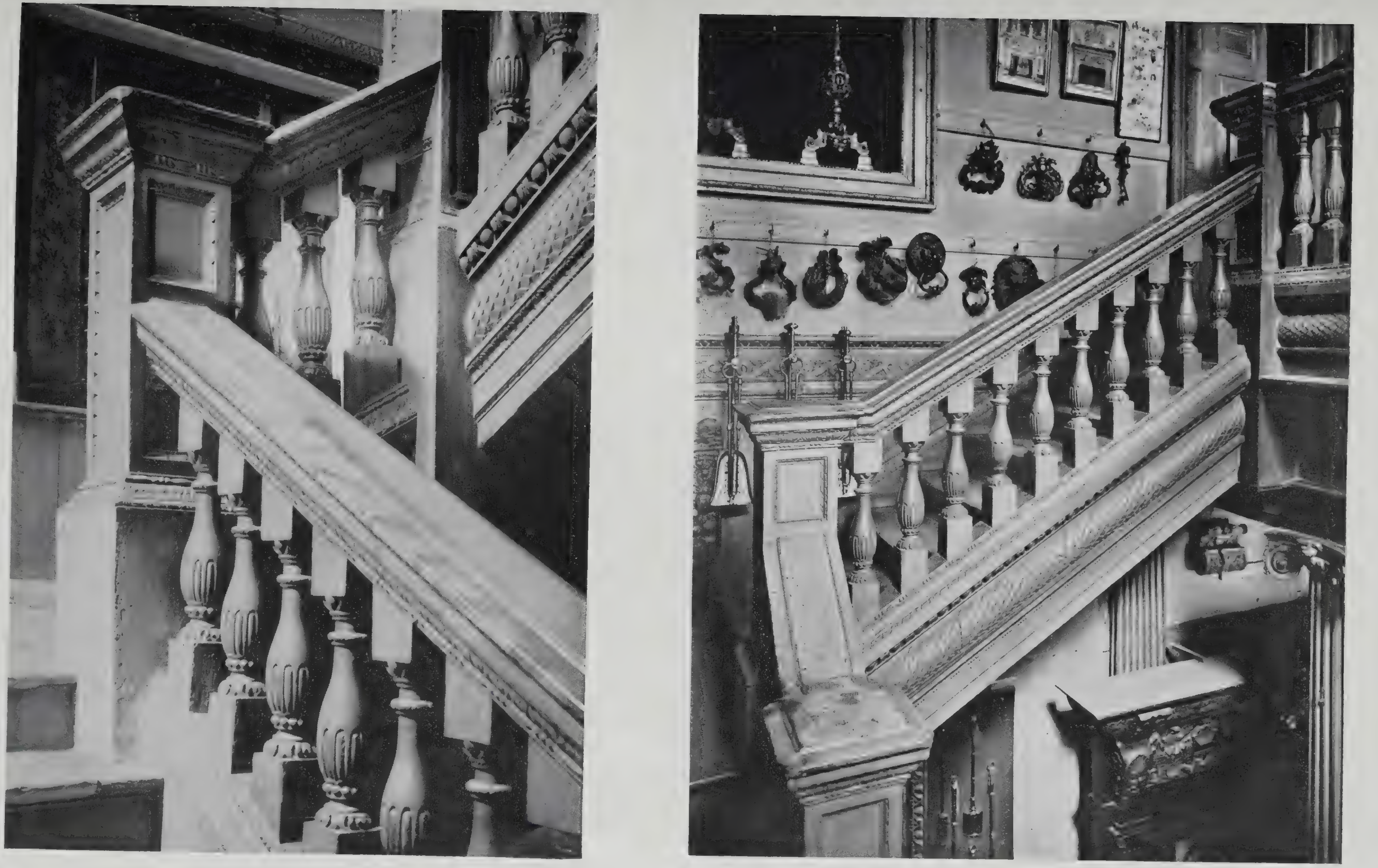
ARCHITECTURAL IDEAS.—II. BY AN ARCHITECT ON WAR SERVICE.



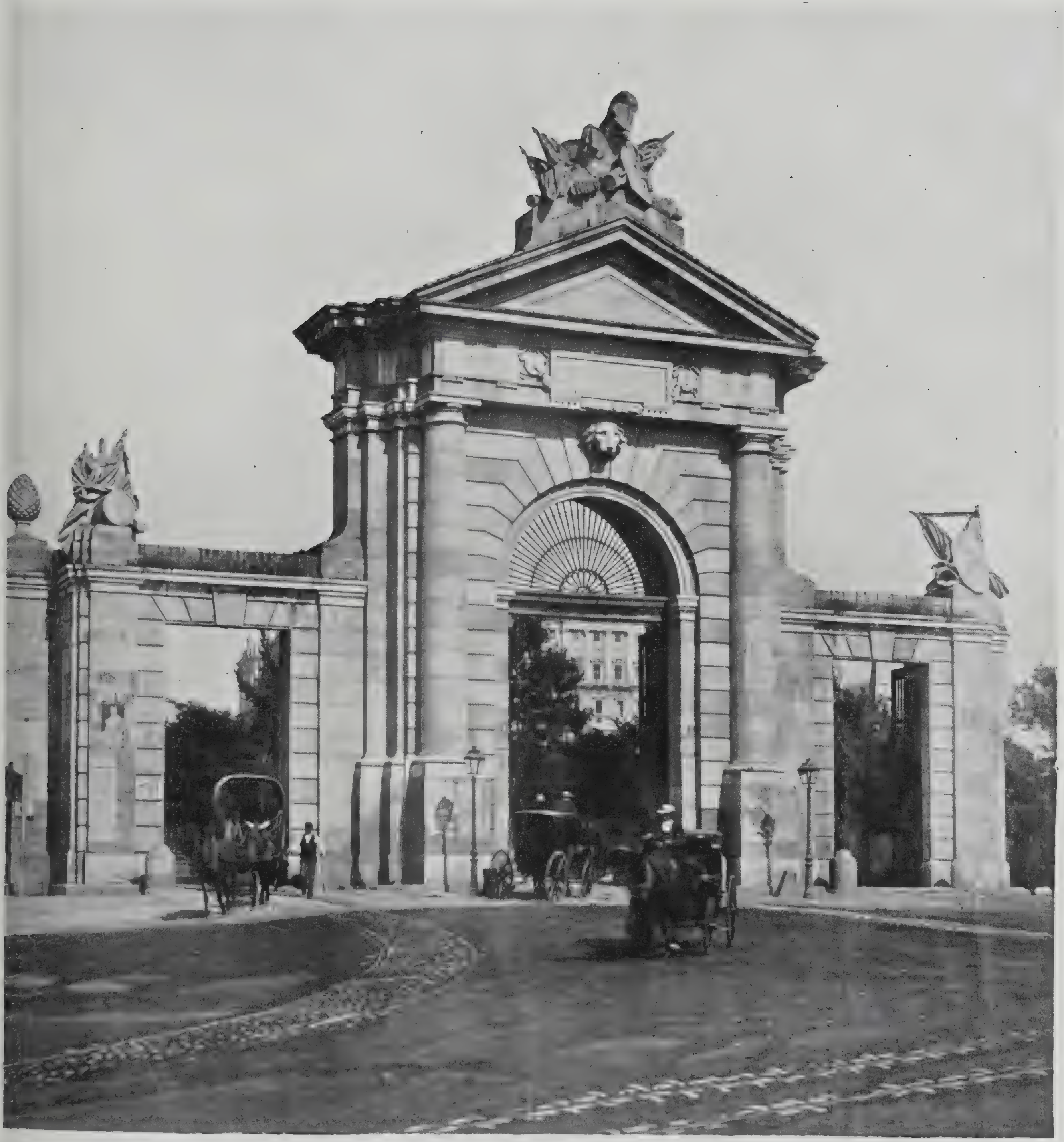
· PLAN

MODERN AMERICAN ARCHITECTURE (SERIES II.). XXXVIII.—MAUSOLEUM, CYPRESS HILL, BROOKLYN, N.Y.

CLARENCE LUCE, ARCHITECT.



DETAILS OF CRAFTSMANSHIP (SERIES II.). XXXVII.—STAIRCASE AT No. 9. CLIFFORD STREET, LONDON, W.



MONUMENTAL ARCHITECTURE (SERIES II.). XXIII.—PORTE SAINT-VINCENT, MADRID

THE ARCHITECTS' AND BUILDERS' JOURNAL.

SEPTEMBER 12, 1917. *TOTHILL STREET, WESTMINSTER.* VOLUME 46. No. 1184.

LORD LEVERHULME has repeated, in his address as president of the Royal National Eisteddfod at Birkenhead, the suggestions for dustrial reform upon which we commented a few eks back. He began his address with a gloomy and pressing estimate of the enormous financial burdens h which the war is saddling us. He supposes that resultant taxation must ultimately amount to more n nine shillings per head per week for every man, man, and child in the kingdom. It may be so; but burden shall not crush us. Lord Leverhulme shows how to shoulder it gaily and without hindrance progress. There are twenty-four hours to the day, l all may be working hours. It may thus be possible reble our output. Means of production—that is, chinery and tools—need never stand idle. There o reason why they should rest and rust for sixteen rs out of the twenty-four. But men and women not to suffer from this incessant movement. On contrary, it is to make their lives easier. Their ges are to be higher, and their hours of labour are e fewer. Under the shift system, they need work more than six hours a day. They will have more ure for living, and in time they will grow hardier, e energetic, more cheerful, more productive.

* * * *

ord Leverhulme has discovered the root cause of ur unrest, and suggests the right course of remedial tment. "If," he says, "with the conditions of s occupied in daily labour, you also take into ideration—as unhappily must often be the case to e at its true bearings on the problem of education at our workers are often also underfed, undersed, and overcrowded in insanitary kill-joy homes, can we wonder at what is called labour unrest? en and women were satisfied to endure quietly conditions, then we might indeed despair of their re and the future of the British race." This, we onvinced, is no mere idealising of an exceptionally rous mind: it is practical common sense. What ws is equally cogent: "Not only can we produce, all ranks and all classes of both sexes are workers ix hours each day for six days each week, all the , machinery, factories, homes, and goods we ire both for home requirements and for exchange aw materials through our export markets, but the es can be built in beautiful garden suburbs; we provide adequately for education, mental and ical, and military training for national defence. ldition, all being workers, our burden of taxation -being then wisely laid on wealth produced—be by all without impoverishment or oppression of . . . There will be no place in the whole h Empire for the idle rich or the idle or nny poor." That is the plain truth of the r, and we shall ignore it at our peril. We have to up for enormous losses, and Lord Leverhulme hown very plainly, from the industrial point of how it can be done. Any man, rich or poor, who o shirk his share of the burden will be no less a r to his country than if, being qualified for ry service, he had sought to evade it in war-time, e issues of peace and war are of equal importance.

* * * *

late "The Londoner" of the "Evening News" ade several welcome incursions into our domain. ent "Gossip" had Government building for its subject, with particular reference to the housing problem. "A million new cottages," he says, "will change the face of the country; we shall not take a walk down any lane without a sight of one of those cottages. What vexes me is a doubt whether I shall be glad to see that cottage. . . . I do not think that Government has a pretty knack of building. So far as I have watched it playing with the box of bricks I have remarked that it has two styles, and that both of them are bad styles. One of the styles is the pompous. In its pompous manner Government builds its own offices for its dear civil servants. You may go to Whitehall and say whether you like those respectable palaces any better than I do. The other Government style," the author goes on, with Gnomic sententiousness, "is the dolorously mean. That is the style which does for the soldiers' barracks and the like buildings." "Does for" is distinctly good, whether or not the author devised the *double entente* or merely hit upon it accidentally. Barracks, as he says in effect, have not usually a cheerful and inviting appearance. An appropriate inscription for most of them would be, "Abandon hope, all ye who enter here." They could never have promoted recruiting, and they have added to the hardships of conscription. If, as "The Londoner" contends, Government builds in only two ways, the pompous and the dolorously mean, it follows that the million cottages "will not be in the pompous style. . . . I think they will be in the other manner, those cottages. And it will not be a beautiful England that holds them."

* * * * *

That Government will not build them at all does not greatly discredit this Cassandra prophecy. Those cottages, it is to be feared, are in danger of inheriting the old official taint. It must not be; and, looking at the matter steadily, we cannot say that we share to the full those gloomy apprehensions. Newer and better examples of cottage building are before us. Port Sunlight, Bournville, Messrs. Adshead and Ramsey's beautiful little houses at Kennington, the war-workers' estate at Well Hall, have marked out a new course and embodied higher ideals upon which it should now be impossible to go back very far. Sir Aston Webb, as a member of the Local Government Board Committee, will no doubt press home this particular point; and it will certainly not be neglected by the Institute Committee which has been appointed to consider the whole question of housing. If the very magnitude of the contemplated operations is a strong temptation to build hastily, meanly, and cheaply, it is also a strong reason why this temptation should be overcome, for the multiplication of mean buildings all over the country is an appalling prospect. They would disgrace and degrade the nation. It may be quite safely assumed that at the worst they will be sanitary—that is to say, they will be weatherproof, will contain the prescribed amount of cubic space, and will get their due allowance of light and air, and that the drains will be all right. These provisions are essential and elemental. We have got beyond them. It is now recognised that the new hygiene is justified in refining upon them—that while light, air, and efficient drainage are essential to prevent the sudden and rapid extinction of the race, they do not positively promote its health. They are mainly negative or preventive measures. Something further is needed if we are to aim at the acme of health and energy. That something may perhaps be summarised as cheerfulness. One's surroundings should not be depressing, but the reverse. Mental effects have as much influence on the health of man as physical effects.

* * * *

If we are to believe the ladies who at the moment are flooding the Press with complaints about house-planning, they suffer much worry and ill-health because domestic interiors are inconveniently arranged. There are too many steps and too few cupboards and shelves. Cooking, washing, and other forms of household drudgery are made purgatorial because man does not understand the requirements. Thus a correspondent of the "Common Cause"—a feminist organ, we believe—is as nervously apprehensive for the internal economy of the new dwelling as "The Londoner" is for its exterior. She writes: "The cry of 'economical building' is already being raised, and in the experience of most of us that means no pantry, no cupboards, no baths, and an old type of kitchen range!" She deprecates experiments that provide "only one living-room, and the bath sunk into the ground before the kitchen fire," demands that the suggestions of working women should be collected and considered, and seeks examples of "what has been done anywhere in building small houses requiring the minimum of work to keep them in order." All these claims seem reasonable enough. What has hitherto hindered their realisation is the neglect to enlist the aid of the architect, who, as we had occasion to mention a few weeks ago, has little or nothing to do with the planning of working-class dwellings, or of what is commonly known as "small property" generally. Yet the blame for inconvenient planning, for the absence of cupboards and shelves, for the awkward hanging of doors, for the stiffness or looseness of window-sashes, for draughtiness, for smoky chimneys, for flooring that seems to consist mainly of knife-edges which immediately cut their way through the carpet, and for a hundred other troubles, the architect is invariably blamed, and the builder-owner is seldom anxious to point out that there was no architect—indeed, he is suspected of finding the non-existent architect as convenient for his purposes as Mrs. Gamp found Mrs. 'Arris, and there is seldom a courageous Betsy Prig to insinuate, "I don't believe there ain't no sich person."

* * * *

Another lady—Mrs. or Miss Lang—has written in the "Star" an entertaining article on "The House that Jill Built." She has sampled houses of three attributions—the house that Jack built, and the domiciliary edifices erected respectively by Jerry and by Jill. Jack, strange to say, was not the knave of the pack. That honour goes to Jerry. "All the doors and windows of Jerry's house had been made in Germany—it was before the war—or in Sweden by Hun masters in the art of the cheap and nasty. In wet weather all the doors and window-frames shrank from their surroundings like sensitive plants in a storm, and our humble dwelling became as a sanatorium for a fresh-air cure." It would have been better if she had not mentioned this qualification. Jerry will now claim that ill-fitting doors and windows are good for the health. To proceed: "In Jerry's house were many cupboards. But, alas! not one was in the right place, and their narrow doors refused to admit my modest box, so that they were useless for storage or box-rooms." Why, there you have it. Satisfy a lady as to the number of cupboards (a matter, indeed, in which one had thought her to be quantitatively insatiable), and you still have to explain why they are in the wrong place, or why they are too small, or too large, or too something else. Not much more fortunate in his woodwork was Jack the builder. He "had called in Jack the carpenter, and the two, both ex-Guardsmen, had put up shelves at a height convenient to themselves, a lead followed later by the shilling-in-the-slot gas-meter man, who, e time the gas gave out, provided Jill wth the plea alternative of suicide or starvation and utter darkn These Jacks forgot to nut in "the harmless nece cupboards, forgot also to provide a draining-boa the sink, and failed to give the sink the slope lightens Jill's task of keeping it clean."

* * * *

Finally, the lady found the perfect house. It the house that Jill built. It was, needless to s house of many cupboards, all practicable. Its sloped and had a draining-board and other access It was a dream-sink. Our lady writer must sionally have rushed downstairs first thing in the m ing to make sure that it was a reality. Lo! a pe house. "And the moral is, Let Jack take Jill partnership when he is planning houses," whic precisely the idea with which we dallied a few w ago when dealing casually with the delicate subje lady architects. Nevertheless, a doubt is insinu that, as a rule, ladies prefer designing man to desig woman; so perhaps, after all, we are not much n the final solution of the great shelf-and-cupb question; more especially since, as we have seen not Jack who builds the humbler class of dwelling Jerry, who will not be ousted by the interesting fi Jack and Jill, FF.R.I.B.A., until architects are st enough to insist that unqualified persons shall n permitted to usurp their functions.

* * * *

There have been many attempts to burke national housing policy by calling it hard name is "Socialism," for instance. "Give a dog a bad ——." We English have been often accused of horribly afraid of words, while easily tolerating things they represent. Professor Lethaby s rather nervous about words. He knows their po for evil. He held, it will be remembered, that talked more about tidiness and less about æstheti should meet with less opposition to amenity. No he was right. We now see, from the latest issue R.I.B.A. Journal, that in the course of the R. informal conference on "Architecture and Civi tion" Professor Lethaby rode this hobby a little A resolution was proposed which contained the "constructive social policy." Professor Lethaby mented, "There are certain words that we are no posed to use here, and there are certain words th may use. If you were to say in the resolution, structive policy,' it would be much the same, a would avoid the use of words which would not keeping. We are not supposed to use the 'social' or 'democracy.' If you did you woul up the backs of a large contingent of the Coun once." Professor Lethaby carried his point. B the pity of it that we should be so word-ridden.

* * * *

Mr. Sydney Perks, surveyor to the Corporati the City of London, publishes a very graceful ack ledgment of the assistance he has received from half a dozen of his professional brethren in the sele of premises suitable as shelters for the public d air-raids. There was a large area to be covered the arrangements had to be made at short notic the work was done well and quickly. Other muni authorities whose towns are at all likely to be att should copy this excellent example. It is a mat which architects and surveyors are the persons qualified to render effective service, whether the upon intimate local knowledge, or whether they d upon the instant judgment possible only to the tr eye; which things, being perfectly obvious, are fore the more likely to be overlooked. To ov the architect is, indeed, an inveterate national cu and we are glad to record this gratifying insta the contrary.

HERE AND THERE.

ASTINGS, where I have been taking a few
days' rest—I mention the fact as an
excuse for my present choice of subject—
ually recommended in the guide-books by a
-handed compliment from Charles Lamb. "We
been," he writes, "dull at Worthing one summer,
er at Brighton another, dullest at Eastbourne a
l, and are at this moment doing dreary penance
astings! I love town or country, but this detest-
Cinque Port is neither." Clearly a case of pro-
sive dyspepsia. Probably he had just written
'Farewell to Tobacco," and his serio-comic
ribe against Hastings was penned before, in 1828,
Burton began to build the very respectable town
t. Leonards, which, when Lamb was at Hastings
323, was a mere common.

* * * *

Leonards, I will venture to say, has the most
ectable buildings anywhere to be found facing
sea around our tight little island. With their
es of columns and pilasters, their pediments, their
des that shelter shops from the glare of the sun, the
of the St. Leonards buildings beggar Bond Street.
g terraces, each with its central "pediment and
ico," were designed in accordance with a well-
eived general scheme. Mr. Burton was therefore
oneer in town-planning, and has left us a fine
nple, which no one seems to have had the courage
nitate, of a serenely—almost severely—dignified
front. Repartitioning of the property has had a
ous effect on the external redecoration of these
buildings. They are striped like the zebra. If
owner of one house painted his front a cool French
, his neighbour forthwith painted the house next
r a nice warm brown. Where a pillar is divided
ically between two owners, the two halves of it
of distinctive tints, like the leg of a Court jester.
d continuous balconies have one half dull gold
the other half bright silver. How is it that
ons are allowed to perpetrate such enormities?
ing, I hope, bowels of mercy, I do not say that
punishment should fit the crime—that the per-
ators should be visited with forty stripes save
; but I do hold that such absurdities should be
ented—that machinery for their prevention
ıld be set up in every township.

* * * *

here the houses do not form part of a general
me, 'tis no matter if collectively they are painted
ll the colours of the rainbow. Those quaint little
ow houses which are peculiar to the seaside, and
back to the Regency, and are perhaps most
erous in Margate—those houses with the bow-
dows that are sometimes oriels, but more often
up both stories of the building—there are never
e than two—and are girt about with tin-topped
ndas spikily vandyked at their edges—those
e houses, I say, may each and all bear an indi-
ıal tint, tone, or colour—some red, some blue,
e pink—and the terrace shall be the more seduc-
for the variegation. One has been amused rather
ı shocked at seeing them at other resorts a riot of
ıary colours; but at Hastings they are, generally
king, of a uniform drabness. Perhaps it is
ıght that their individuality is sufficiently marked
cturally. It is only in the great homogeneous
aces that differential paint is required to show that
-half of a pillar belongs to Brown and the other
to Jones, or that this grey lodging-house has no
ıection with the yellow one next door.

* * * *

hat colour is usually functional as well as decora-
the house-painter could have told Darwin. But, as a matter of applied pigment, it performs other offices besides those of protection and decoration. For example, it is recorded that a certain great lady had the door of her West-End house painted a vivid blue to enable her husband—an eminent man whose eyesight was failing—to distinguish his own residence in the row. I trust that the gentleman never reached a "blue-blind" condition—a phrase that somehow seems familiar, though, for the moment, its significance escapes me. Blue, however, is at best a melancholic colour. Some of the old doors in and around Smith Square are enamelled in rather daring colours, which, however, do not strike one as being "loud." There is, of course, a quality in colours which is not always expressed in their generic names; and whether or not a blue saddens the spirits, or a red promotes pugnacity, depends very much on the particular shade, or on the fineness or coarseness of the pigment and the brushwork. Some red doors I have seen have suggested a warmth of welcome. At all events, one sees no particular reason why the front door should always be of sombre and depressing hue, nor why all the doors in a street should be of the selfsame colour, as they mostly are in St. Leonards, where they seem to suggest that the Mr. Burton who framed them must have been akin to Burton of the "Anatomie of Melancholy."

* * * *

Of the many churches in Hastings and St. Leonards most are architecturally interesting. They are, of course, nearly all Gothic. St. Mary-in-the-Castle, however, of which the first stone was laid in 1825, was evidently intended as a foretaste of the Classic revival. It is the central feature of Pelham Crescent, which also wears a refreshing air of Classicality; the view of the crescent and the church is utterly ruined by a row of ugly one-story shops that seem to have been set there with the deliberate and malign purpose of destroying amenity. Another affront that is not the less annoying because it is trifling—a tiny insect may make a great eyesore—is the scurvy treatment of the frieze. Some too businesslike person has chosen to adorn the frieze with the name of the church, painted in the most vernacular style imaginable. Of course, any sort of painted inscription on a frieze is deplorable; but this particular lettering is of the shop shoppy. To emphasise its vulgarity there is just below it a very neat and appropriate line of lettering—probably designed by the architect—recording in Latin when the church was *exstructa*. How, with this example before him, anyone could deliberately consent to the painting of an inscription above it passes understanding, and why its continuance is tolerated is equally inexplicable. Again, one yearns for a censorship to control such matters.

* * * *

In most towns, especially those on the coast, the lettering from which the eye is allowed no rest is maddening. This, I take it, is the fault of the traders rather than of the sign-writers. To give them their due, the writers are wonderfully expert. They are such accomplished wielders of the brush as to add a further pang to our torments; for here is talent misapplied. They will tell you that they cannot afford to be simple, their clients preferring a flashy manifestation of cleverness. There can be no doubt that, in the present state of public taste, cleverness is vastly more admired than decorum. One small effort to educate the public eye I noticed with perhaps disproportionate pleasure. Outside the Brassey Institute there is a signboard announcing that an art school is held within. It is a beautiful sample of lettering as it should be done—simple, well-proportioned, supremely legible—a meek protest against the dexterously elaborated signboards and fascias that make life irksome. That solitary sign is the harbinger of reform: in good time it is going to add indefinitely to the amenities of the town, because the new generation of sign-writers will come under its direct influence.

* * * *

Another encouraging sign is that someone in Hastings—probably an architect—has discovered how to spell "Maisonnette." It was startling to find this correct rendering on one of the boarding-houses. Fortunately it was integral with the building, being sunk in the cement, and therefore the less likely to "suffer a sea-change." Less admirable are the memorial tablets which the Corporation (presumably) have begun to place on buildings having historical associations. One has been affixed to the ancient half-timber cottage in All Saints' Street, where Admiral Sir Cloudesley Shovell is said to have visited his mother. A similar tablet is placed on the plain brickwork Georgian house where lived Capel, censor of plays and Shakespearian commentator, to whom Garrick was a frequent visitor. On one of his visits Garrick appeared "for one night only" at the benefit performance of an actor who had had a run of bad luck, and the theatre—now, I believe, a Wesleyan chapel—was, for once in its history, crowded to its fullest capacity. Garrick met the actor by chance on the beach, heard his tale of woe, and generously consented to play for him. But those two tablets are fearsome-looking slabs of white marble, shaped as if a monumental mason had devised them. If all the houses in Hastings worth commemorating are to be of this pattern a tour of inspection will give the mental effect of Hervey's "Meditations Among the Tombs," a work for which, in jocund summer, there is no great demand at seaside libraries. Admiral Sir Percy Scott unveiled the Shovell memorial, and Stephen Phillips, the dramatist, that to Capel. I wonder what they thought of the design.

DIOGENES.

THE PLATES.

Architectural Ideas in War Time.

THIS is another brilliant perspective drawing made by an eminent architect, now on war service, in odd moments of freedom from military duties. A further example will appear next week.

The East Elevation of Blenheim Palace.

In our issue for August 1 we published a photographic view of the east elevation of Blenheim Palace. For the purpose of comparison we now reproduce a rendered drawing of the same front, made by a student of Liverpool University.

The Mary Baker Eddy Memorial.

A beautiful memorial to Mary Baker Eddy, the discoverer and founder of Christian Science, has been erected at Mount Auburn Cemetery, Cambridge, Mass. The fund for its construction, amounting to over $150,000, was first announced by the directors in June, 1911, and was some time ago fully subscribed. Contributions were made by Christian Scientists throughout the world. The site on which the memorial stands is not only one of great natural beauty, but on account of its grade has rendered possible a more picturesque and interesting treatment architecturally than would be possible on a perfectly level site. The plot on which it stands is approximately 80 ft. square, and slopes gradually from the level of the roadway to the lake, with a drop of about 10 ft. The memorial consists of a circular open colonnade of eight columns, resting upon a stylobate of three steps, surrounded on the front by a circular platform slightly above natural grade, from which platform a double fligl steps leads to a lower platform at the lake's edge. scheme has no prototype, and is merely a scree columns open to the sky, enclosing a flower-g circle. The material used for the memorial is B white granite, the inscription in the frieze and upor top of the pylons being of white bronze let deep the stonework. The detail is entirely floral in and free in treatment, the wild rose and the morr glory being used as the main motives. It is interes architecturally to note that while it is extremely fr treatment and not at all conventional, it is gene Classic in feeling. The extreme width of memorial is about 50 ft., and the colonnad 18 ft. in diameter. The columns themselves 15 ft. in height, and are similar in general chara to those in the Clepsydra of Andronicus of Cyr The architect is Mr. Egerton Swartwout, of New City, who designed the new George Washin memorial, the new Missouri State Capitol, and the Federal building in Denver.

Leasowe Sanatorium, Cheshire.

This building is fully described in the article w appears under the "War Buildings Section" in issue.

MODERN INDUSTRIAL BUILDING

IT has been shown that what is known as the fac system was a direct outcome of the expansio English commerce. Reciprocally, it has gre assisted that expansion, and it is obvious that extent to which it will carry on this movement depend largely on the efficiency of the factory buil on its precise adaptation to industrial needs. W the means of communication remained primitive, t and villages were comparatively isolated and inde dent. Each community was self-contained, produ but little more than what was required for local sumption. Then, in 1769, James Watt took ou patent for the steam-engine: and in 1814 Ge Stephenson built the first railway locomotive, w attained the astonishing speed of six miles an h Full speed ahead for the industrial revolution! S was annihilated. The home handicrafts w sufficed the small self-contained community was in quate to the enlarged scheme of supply and dem Handwork was too slow to meet an outside den that was a hundredfold larger than that arising the merely local consumption, and the handwor were suddenly haled into factories to tend the machines. Wretched factories, for the most part, were—run up in a great hurry, and without any clear notion of the functions they would have to f or of the hygienic laws that must be embodied in t if the workers were to be kept healthy and vigo These early factories were necessarily primi because the knowledge of requirements was then meagre; the principles of factory design and cons tion had to be gradually evolved as experience gr

Great Britain eventually lost her supremac industry because she clung tenaciously to methods had grown obsolete; and these methods pers mainly because the old type of factory was promptly discarded when it was seen to be out of and because putting new machinery into old fact is as incongruous as putting new wine into old bot Hence our long start in the manufacturing indus came at length to react upon us as a grave disad tage in the competition with countries that mac much later but much better beginning. Experi had been accumulated, business organisation had developed into something that is not very diffe from a science, and factories were designed to me every detail the demand for strictly economic pro

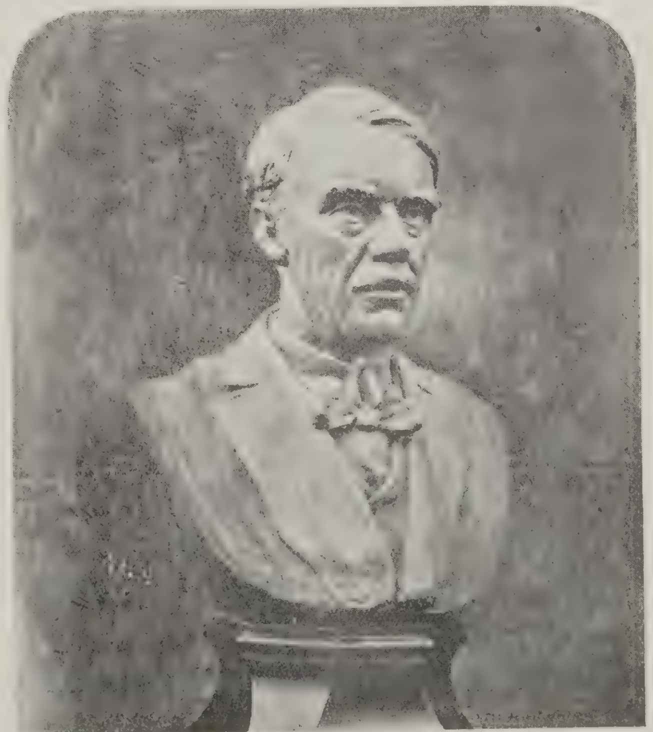
ı. "A roof carried on four walls, with windows
e and there," as Mr. Kahn puts it, stood no chance
ompetition against a building in which every detail
; carefully adapted to facilitate productive activity.
ı superior building—that is, one in which every
ıil has been carefully thought out by experts having
knowledge of all the requirements and of the most
roved methods of meeting them—implies superior
ning capacity; and Mr. Kahn is no doubt justified
advising that "in many cases it is far better to
nolish the structure and start entirely afresh with a
v building constructed to meet the specific require-
nts" rather than to attempt to adapt an old building
ıew uses. This, of course, is not a rule absolute, the
hor recognising that while the alteration of an old
lding is generally inadvisable, "it does not neces-
ily follow that a well-designed building must be
nolished when a new development occurs in the
iness; because every capable designer allows for
re or less elasticity in the manufacture of new pro-
ts, and for this reason it may be quite possible and
isfactory to utilise the existing structure, with new
angements for the revised routine of manufacture."
meet the needs of expansion, the "unit system" of
ıstruction has been devised, and is explained and
strated in the book.

Gradually there has been evolved an entirely new
e of factory building, and the principles upon which
s constructed are set forth coherently for the first
ıe in this most opportune book, which embodies the
owledge, experience, and study of a specialist who
s long enjoyed an extensive practice in both hemi-
ıeres. Thorough mastery of the subject has enabled
n to treat it with the utmost clearness and concise-
ss, and the book makes excellent reading., Every
ject of the design and construction of industrial
ildings is discussed with the ease that is only possible
one who has the whole subject at his fingers' ends,
d the book affords exactly the kind of information
d guidance of which the architect or the capitalist
out to build a factory is in search. Mere common-
ıce details of construction, such as are to be found in
y ordinary text-book, and with which every architect
d builder is already conversant, are omitted; but the
neral principles involved are clearly enunciated and
tically discussed. We get, consequently, invaluable
idance on planning; on the choice of the type of
ilding most suitable for given requirements; on
rious methods of construction and their relative
sts; on lighting, heating, and ventilating, plumbing
d drainage, and other practical points. A chapter on
chitectural treatment approaches that subject from
urely business point of view; the author contenting
nself with proofs that "pleasing appearance" pays.
ıat it can be imparted he demonstrates by many
amples among the plates—more than seventy in
mber—with which the book is illustrated. These,
picting modern factories of various types and
rving many different industries, form probably the
est collection of the kind ever got together, and are
striking proof—nay, a mirror and a record—of the
mense progress that has been made in factory
ilding during the past decade. These are obviously
most interesting feature of the book, whose chief
lue, however, is the sound practical guidance it
ords on points about which the prospective builder
anxious to obtain trustworthy and authoritative
formation not to be found elsewhere. A chapter on
Welfare Work in the Factory" reveals the extent to
ıich modern factory polity has been humanised, and
ustrates, as the author observes, "how welfare and
onomic conceptions are co-related." Scientific
ıanagement now takes carefully into account the
vchology of the worker. It is realised that, to put
bluntly, the more that can be done for the worker
e more will he do, and the more sympathy and con-
deration is shown him, the more readily will he respond to it, to the mutual advantage of employer and employed. This is now the dominant note in industrial organisation. It has a very obvious bearing on the details—one might almost say the ethics—of factory construction, and Mr. Kahn has done well to devote a chapter to it. The book is nothing if not practical; and yet through it all there runs a fine thread of common-sense philosophy which is thoroughly representative of those newer and more enlightened views of industrial economics which are bound to prevail in the coming reconstruction. It not too much to say that the book is the harbinger of a new industrial era; and it is certainly a strong persuasive to right building.

"The Design and Construction of Industrial Buildings." By Moritz Kahn. With 72 plates, and illustrations in the text. Price 7s. 6d. net. London: Technical Journals, Ltd., 27-29, Tothill Street, Westminster, S.W.

MR. THOMAS H. MAWSON AND SALONICA.

It is announced that Mr. Thomas H. Mawson, of the School of Civic Design, Liverpool University, has been invited by M. Venizelos to undertake the replanning of Salonica. It will be remembered that a disastrous fire occurred there recently, involving the destruction of as much as one-third of the city's total area. At the outbreak of the war Mr. Mawson had in hand a commission for the replanning of Athens. Thus, by a curious chain of circumstances, two of the most important commissions with which he has yet been entrusted emanate from Greece. At present Mr. Mawson is busily engaged in London, completing an organisation for the creation of industrial villages and suburban settlements for partially disabled soldiers and sailors. He has embodied the idea in a volume shortly to be published under the title of "An Imperial Obligation," to which Sir Douglas Haig has contributed a foreword." The bust of Mr. Mawson, illustrated below, is by Miss Joyce A. Reddrop; it was exhibited at this year's Royal Academy.



BUST OF MR. THOMAS H. MAWSON, Hon.A.R.I.B.A.

BY MISS JOYCE A. REDDROP.

(Exhibited at the Royal Academy, 1917.)

THE PROPOSED NATIONAL MEMORIAL.

It was well within the first great phase of the war—the phase of hard uphill fighting for the Allies, when the advantages of long preparation were still with the enemy, and many of our worst troubles still lay before us—that the decision to found a National War Museum was taken by the Government. Few then believed, perhaps, that the struggle would enter upon its fourth year with the end not yet in sight, and no combatant on either side forced to lay down arms. It is in these circumstances [illegible] er in the "Daily Tele-[illegible] Sir Alfred Mond's Organis-[illegible] has submitted its plans to [illegible] What we desire to urge [illegible] n—not for the first time—[illegible] at the enormous growth in the magni-[illegible] the war since the time when this enterprise was set on foot, the far greater [illegible]pe and intensity of the British war effort, the more perfect proof of the spirit that is in this people, impose upon us the duty of setting up a foundation which shall be [illegible]h more than a collection of objects [illegible] of that somewhat arid char-[illegible] associated with the word [illegible]. We ought, in fact, to make this an undertaking in the grand manner, to approach it with an imagination quickened by the noble and tragic memories of what has passed, and take for our principle in the work of creation the setting up of a worthy national memorial as well as a complete national record. It ought to be in itself the monument of the war, a place planned with such majesty of design as befits the thing commemorated: a building by far more beautiful and impressive than any of the columns and statues recalling our earlier pride of arms, as this war is greater and higher of purpose than any in the past. It should be worthy of the first of our wars that was made by the will of the whole divided nation, and waged with the strength of its whole manhood and with all its resources. It should be worthy of that verdict of history upon this generation of Britons which we can already foresee. It should express our own pride in our own country's achievement. If all this is to be so, the enterprise cannot be pursued upon grudging and cheeseparing lines. We ought to propose to ourselves splendour and inspiration in the fullest measure that architectural and decorative art can give, generous and imaginative planning, grandeur in the mass, spacious beauty of interior, amplitude in arrangement, a general boldness and liberty of conception, with the carrying out of it all entrusted freely to the finest talent. If we propose these things, we must will the means. Such a national memorial as we owe to the spirit of Britain in this war will never come into being if the work on it is ruled by the thought of how little we need devote to it. It should be planned by the light of the lamp of sacrifice, whose beams, as Ruskin taught us, must be shed on the labour of [illegible] building. If the spirit of niggardliness and false economy cannot be kept out of this business at least, then let us abandon the project once and for all. Many a great opportunity for noble public building has been wretchedly misused through this cause. If we are to have this National Museum, let us have it as a monument to all who lived and died for their country in this tremendous time: not as a monument to our own failure of spirit where things of beauty and stateliness are concerned.

The plans prepared by the committee are, we ("Daily Telegraph") believe, inspired by the ideal which we have tried to indicate. Some of the larger features of the scheme which they are understood to have submitted comprise the Central Hall of Honour, where the splendour of the setting should be in keeping with the fame of those immortalised there in painting and sculpture, the Memorial Gallery, where the name of every man who gave his life in the war should be engraved on bronze, along with the records of ships or military units which have left their corporate mark on the history of these years; the two great glass-covered courts for the display of the mighty war machines of all kinds, and the surrounding buildings to house the smaller collections, the records, the photographs, and the war library. It is an ambitious plan: and it ought to be. It is suggested that a fitting site could be found on the land adjoining the new County Hall on the south bank of the Thames by Westminster Bridge; and we doubt if a better place could be chosen than this, so near the heart of the Capital, when the new building would gain grandeur from the presence of the river and from the neighbourhood of other noble architecture. The expansion of the beauty of London is an aim in itself, and this selection of a site would be no small step in that progress.

REINFORCED SLAB CONCRETE IN ENGINEERING WORKS.

In an article contributed to "Floor Slab Reinforcement," a periodical "issued occasionally in the interests of B.R.C. Fabric by the British Reinforced Concrete Engineering Company, Ltd.," Mr. H. C. James-Carrington, M.C.I., M.I.M.E., writes that although reinforced concrete construction lends itself so readily to the many and varied constructions required in industrial plants, comparatively speaking but little use has been made of this valuable material in the average industrial works. Apart from a limited number of reinforced concrete experts, architects and constructional engineers are only now beginning to realise its full value, and there is open a very wide field of application still untouched. There is hardly a branch of constructional or civil engineering in which reinforced concrete cannot be advantageously and economically employed. For such structures as coal or ash bunkers, storage bins, tanks, retaining walls, factory floors, etc., this form of construction stands unrivalled, and I am convinced that a better understanding and realisation of the simplicity of the material and its application will lead to its very much wider adoption.

Slab Reinforcement.

The early method of reinforcing concrete floor slabs, panel work of tanks, bunkers, etc., by means of ordinary bars, bent as for beam work, spaced and wired to separate transverse rods, was too slow for expeditious work, while the comparatively short lengths of bars that could be conveniently handled involved considerable extra metal in lappage.

This separate bar method has now been almost entirely superseded by mesh reinforcement in some form or other, of which there are many forms now on the market. A consideration of the following conditions for my ideal mesh reinforc will, however, very materially narro field available.

Requirements in the Reinforceme

The ideal mesh reinforcement have the following qualifications:

1. A definite and uniform tensile that can be depended upon to mainta estimated amount.

2. The tensile value of the rein ment must be in straight parallel line formly and rigidly spaced, and capa being readily placed to fall on the " retical lines" of tension.

3. It should be free from short be kinks which destroy tensile value.

4. The spaces between the reinfo metal must be ample and arranged t the least possible restriction to the flow of the liquid concrete aroun metal. Small meshes should therefo avoided.

5. The meshed material must be able in long lengths to give conti over a number of bays without jointi

6. High tensile value means less employed and less dead weight t carried.

The Author's Experience.

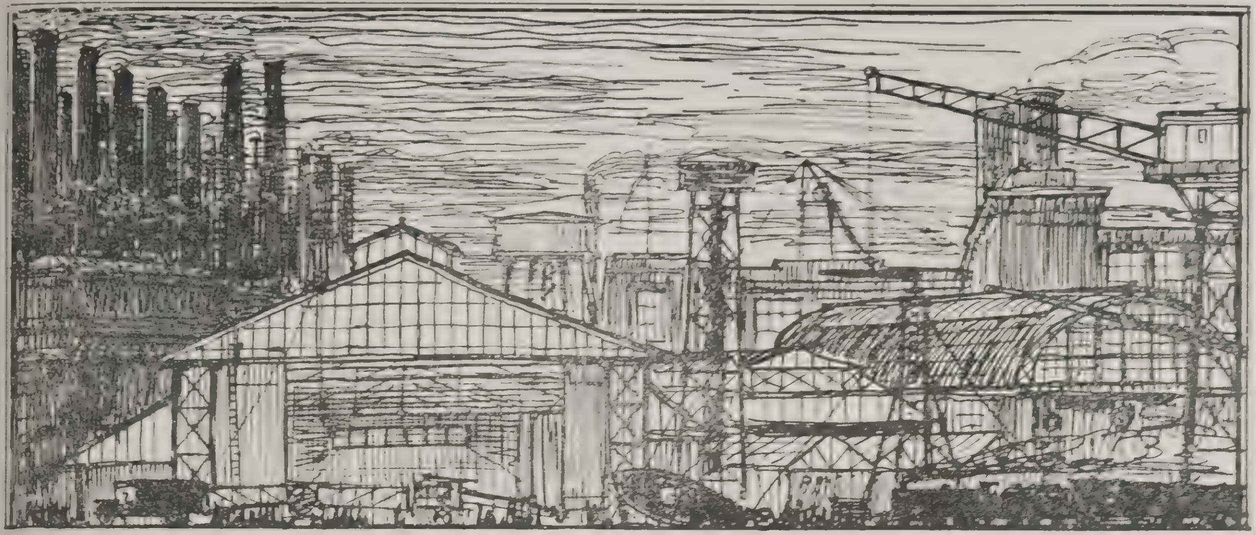
The nearest approach to the ideal reinforcement that I have yet found is trically welded steel wire fabric. Ir the straight line tensile value of the is fully maintained, the bars are unif and rigidly spaced, while the transver inforcements are rigidly connected out impairing the straight line t value.

The welded wire fabric is suffici pliant to be readily placed in the the cally correct position, yet sufficiently in itself to maintain its position placed, while the concrete is being around it; and as the material is ob able in long lengths with a good ran strengths, the reinforcements can readily applied to the various requiren of loads, etc., without waste of materi very important consideration in these of accurate designing.

The professional designer, like doctor, uses those materials best suit each individual case, and with few e tions during the last ten years I have B.R.C. Fabric, on its merit, for sla inforcements with very gratifying re in many important works of widely d rent character.

Wages of Glasgow Plumbers.

Sir Richard Lodge, Edinburgh, in award as arbiter in the dispute betwee Master Plumbers' Association in Gla and the Glasgow Lodges of the U Operative Plumbers' Association, granted the men an advance in wag 2d. per hour from September 1. He also granted a war bonus of 3s. per from the same date. The rule regar wages in Glasgow and suburbs has amended in accordance with this deci It states that the standard rate of w will be 1s. 1½d. per hour for comp workmen, payable weekly. When bing in chemical works or working ballast tanks, bilges, engine-rooms, stokeholds of old ships, or when work on "dirty" materials removed from t places the men are to receive ½d. per extra. When working on old oil-carr ships or on materials removed from ships the men are to receive 1d. per over the standard rate of wages.



WAR·BVILDINGS·SECTION

A WAR-TIME SANATORIUM IN CHESHIRE.

S sanatorium has been built during he war by the Liverpool Invalid ren's Association for the surgical ment of tuberculous children. It is ed on a beautiful site, fourteen acres tent, in the Wirral peninsula in ire, on what is known as Liverpool The hospital is the outcome of the nal Insurance Act, and the Associa- s receiving a capital grant towards ection and an annual grant towards enance. It has been built from is prepared by Mr. T. W. Haigh, of nge Street East, Liverpool, and ap- d by the Local Government Board oard of Education.

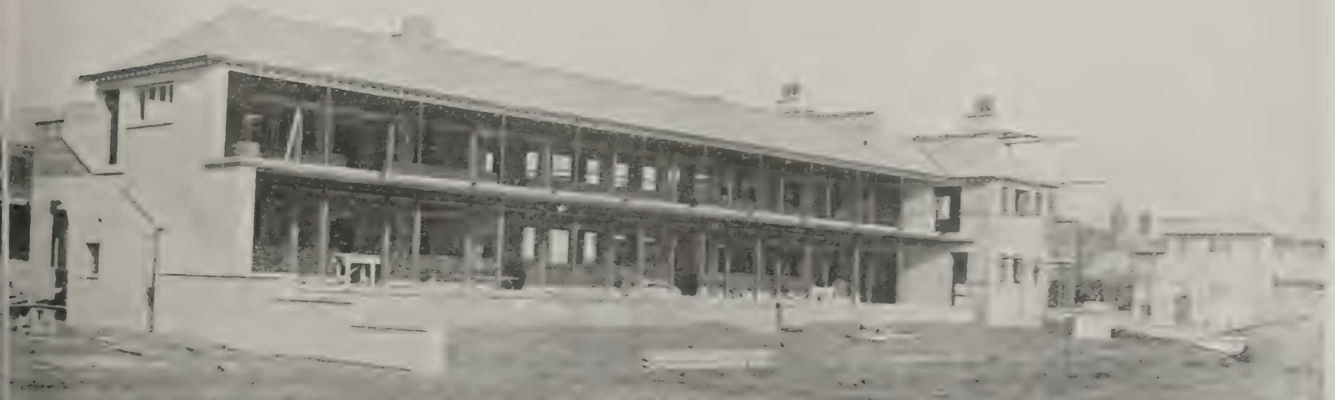
building, which commands fine of the Cheshire and Welsh hills, is ed for 200 children, the accommoda- eing divided into four two-storey pavilions, two of which (C and D) contain forty-four beds in each, two (E and F) contain forty-eight in each, and a one-storey observation and isolation pavilion (A and B) containing sixteen beds. The scheme comprises a large administrative block including operating section, X-ray department, rooms for splint application and for research. Accommodation is included for a staff of residential medical superintendent, matron, cook, four teachers, thirty-one sisters and nurses, linen maid, and twenty-four maids. The large dwelling-house which was on the site when purchased is being utilised temporarily as an administrative department until the new administrative block is completed. The education of as many children as are capable of receiving it has been provided for in the form of an open-air class-room.

Owing to the uncertain nature of the subsoil, the buildings have been erected on reinforced concrete platforms. Common local bricks rendered with spar pebble-dash are used, and the roofs are covered with green slates.

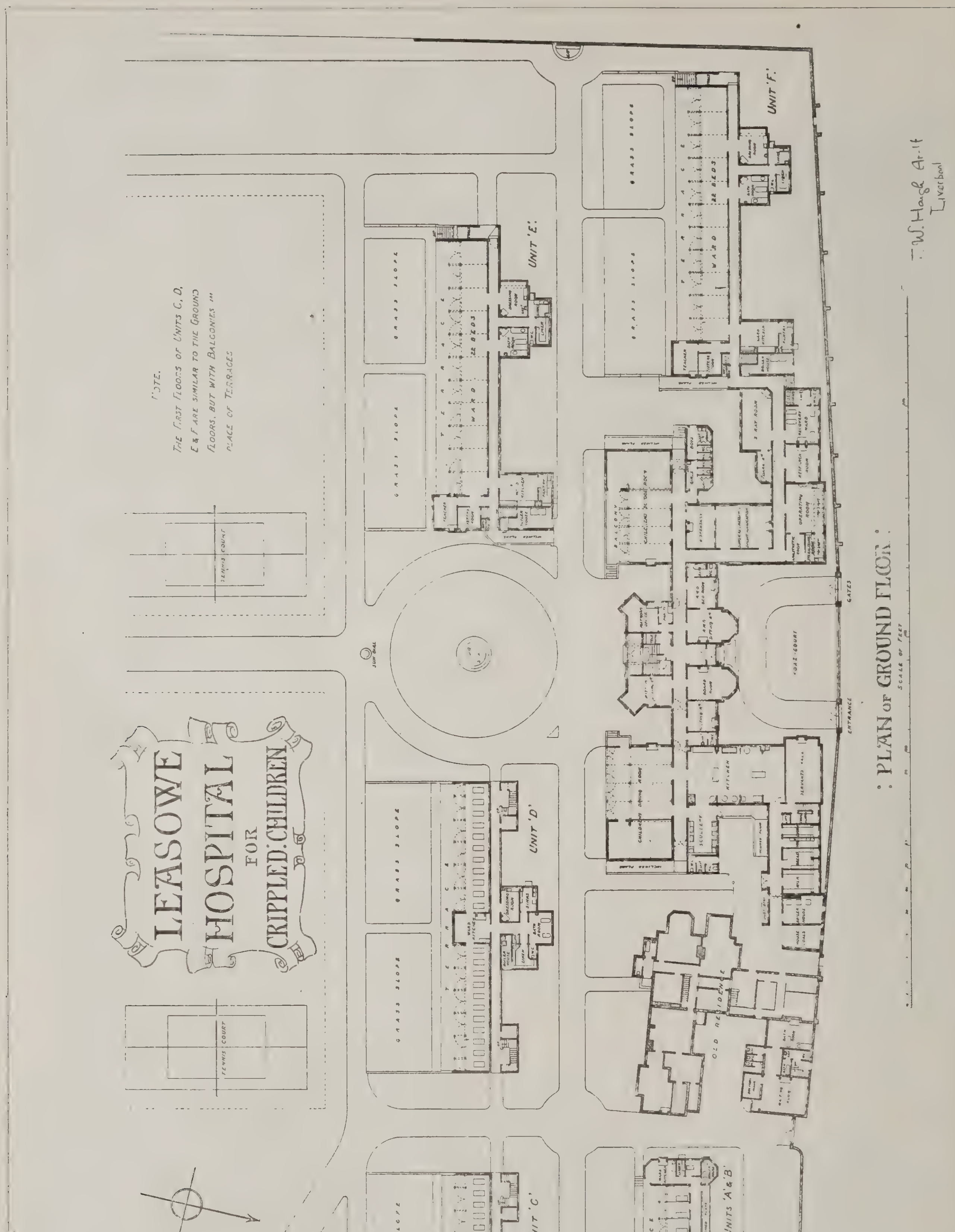
All the doors are flush-framed, hung to linings having rounded external angles and coved internal angles next rebate. All the windows and glazed panels to doors have coved angles at junctions of stiles and rails.

The floors of wards, etc., are of concrete covered with pitch-pine boards in narrow widths secretly nailed, the corridors being finished with marble terrazzo. All internal angles are coved and all external angles rounded.

The sanitary fittings were supplied by Messrs. Morrison and Ingram, of Man



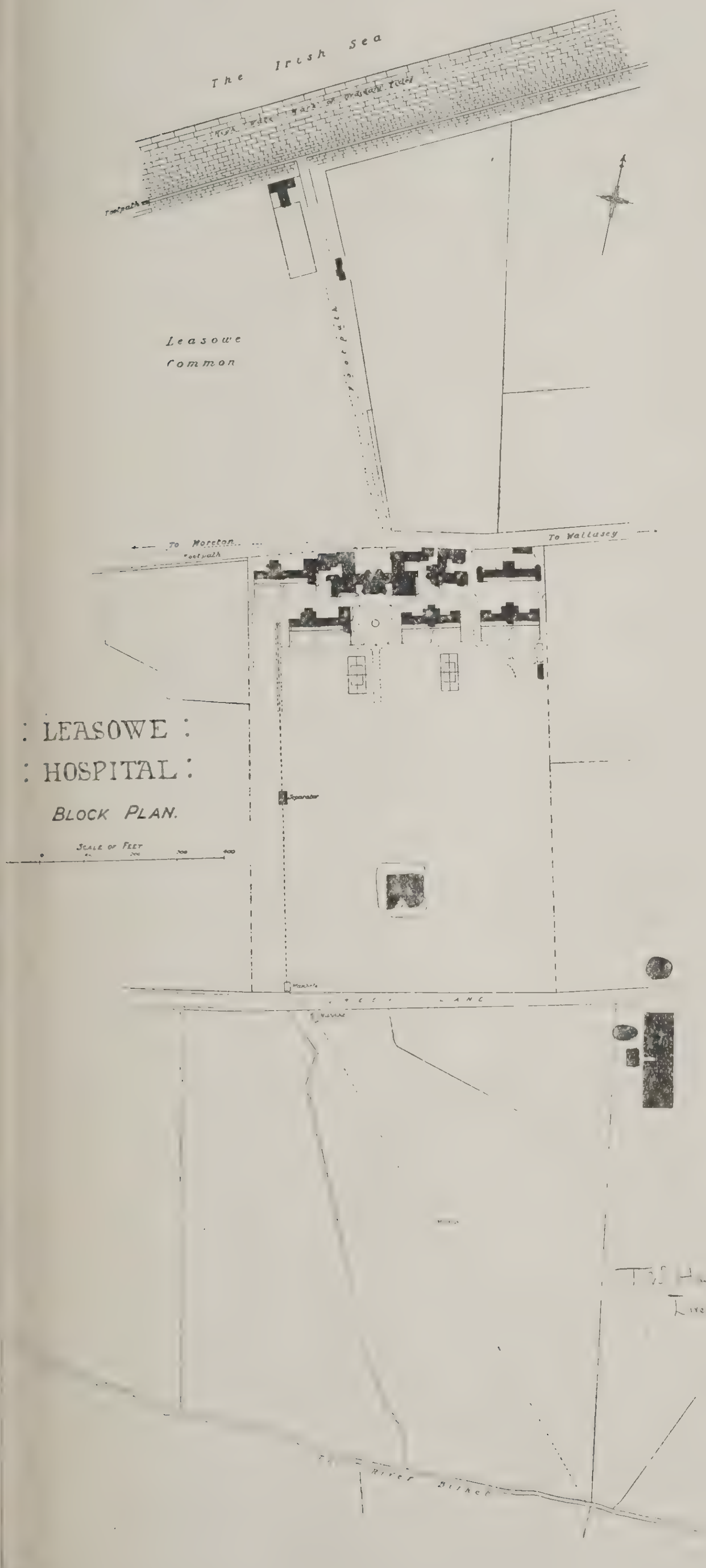
LEASOWE SANATORIUM, CHESHIRE: UNIT "E." T. W. HAIGH, ARCHITECT.



LEASOWE SANATORIUM, CHESHIRE: PLAN OF GROUND FLOOR. T. W. HAIGH, ARCHITECT.

er. All w.c.'s are bracketed from walls. Dual taps are fitted to the ., lavatories, and sinks, having, in the ating department and dressing-rooms, action taps and knee-action wastes.

e main wards are not heated, but in ions E and F warming apparatus has introduced into two small wards to medical exigencies should such arise. e sewage is treated on the site, which her flat—but with a slight fall to the south—a septic tank system of drainage having been found to be impracticable. As some method of purification was felt to be desirable a "separator" was considered a possible solution. Mr. Fred J. Commin, of 5, Victoria Street, was consulted and prepared a drain plan for the whole scheme, introducing a "separator" which successfully deals with the sewage, separating the solids from the liquid, the latter passing through or over a series of troughs or channels, which process aerates and purifies the liquid sewage; and after treatment the clear effluent is conveyed by a drain to the river Birket.



ASOWE SANATORIUM, CHESHIRE: BLOCK PLAN. T. W. HAIGH, ARCHITECT

All the buildings are lighted by electricity, the power being supplied by the Wallasey Corporation. Gas is also supplied for hot-water bottle boilers, sterilisers, and some gas fires in dressing and bathrooms where warmth is required suddenly for a short period. This gas is obtained from the works at Hoylake. Water is obtained from the West Kirkby Waterworks. There is no laundry at present, the washing, excepting small articles, being sent out.

There is no mechanical system of ventilation. Casement windows have been used in the ward pavilions. In the domestic portion sash windows are used and arranged with the usual fillet at sill to relieve the meeting rails. The M.A.P. system has been employed in the upper windows.

It is estimated that the cost of the buildings, exclusive of the purchase of the site and existing buildings (£3,645) will amount to £36,070 or £185 per bed, and that the total cost, inclusive of road-making, laying out terraces, etc., fees and equipment, will amount to £48,000, or £250 per bed.

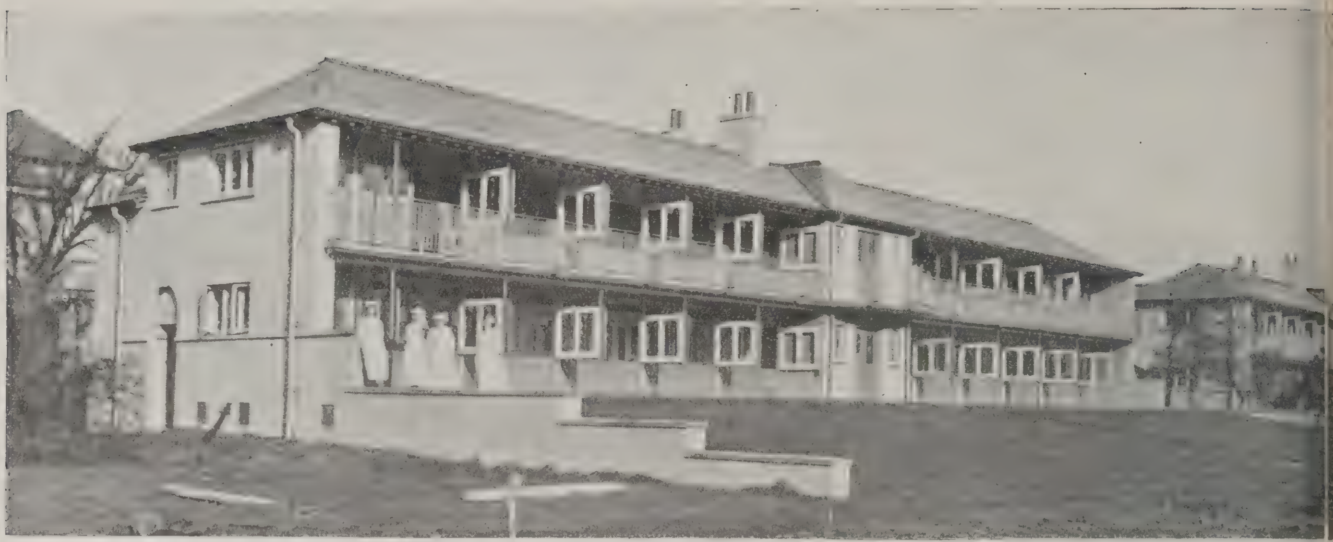
The contractors are Messrs. Brown and Backhouse, of Liverpool.

Other sub-contractors and specialists are: Messrs. Diespeker, Holborn, terrazzo; Messrs. Killick and Cochran, Liverpool, heating, cooking, and domestic hot water supply; Messrs. William Griffiths and Sons, Liverpool, plumbing; Messrs. Brewer and Brunt, Hoylake, electric installation, including telephones; Messrs. Peake and Son, Liverpool, wrought iron; Messrs. John Stubbs and Son, Liverpool, marble work; Messrs. E. A. Clarke, Ltd., Liverpool, Messrs. Well Fire Co., Liverpool, Messrs. Carron and Co., Liverpool, grates and chimneypieces; Messrs. The Sefton Lift and Shutter Co., Liverpool, lifts; Messrs. James Parkinson, Liverpool, special fittings and fitments.

WOMEN IN GASWORKS.

Women, both in London and the provinces, are now employed in many departments of gas manufacture and distribution, doing work which before the war was done exclusively by men. The Gas Light and Coke company employ 1,545 women (300 as clerks and the remainder in works or outside maintenance). The South Metropolitan Gas Company now employ (including clerical and outdoor staff) no fewer than 1,500 women. Birmingham and other corporation gas departments employ many hundreds.

Some of the larger undertakings employ an experienced lady superintendent, who is in sole charge of the female staff, is responsible for discipline, and cooperates both in an administrative and advisory capacity with those who are engaged in the adaptation of the heavier jobs to the physique of women. An instance may be cited in the substitution of half-hundredweight sacks for the one and two-hundredweight sacks of coke, which are, of course, too heavy for loading and delivery by women. Illustrations of women performing various tasks in a gasworks were given in last week's issue, and in previous issues we have shown illustrations of the many kinds of work, more or less akin to the building industries, in which women are rendering their country signal service in her hour of need.



LEASOWE SANATORIUM, CHESHIRE: UNIT "D" WITH "C" IN DISTANCE. T. W. HAIGH, ARCHITECT.

R.I.B.A.

The R.I.B.A. Record of Honour: Forty-Sixth List.

The following particulars are taken from the "R.I.B.A. Journal."

Fallen in the War.

Eaton, Captain Charles William, Leicester Regiment (Associate, 1906). Died of wounds. Aged thirty-five.

Wright, 2nd Lieut. Cecil Lawrence, Royal Garrison Artillery (Associate, 1910). Killed in action in France on July 7. Aged thirty-seven.

Appleby, 2nd Lieut. Sidney Derrick, Loyal North Lancashire Regiment (Student, 1913). Missing, believed killed in action.

When last seen 2nd Lieut. Appleby was gallantly leading his men between the German first and second lines. Then a shell burst close to his party, and neither the survivors nor subsequent search parties could find his body. "A very gallant officer and a great favourite with us all," writes his Company Captain. At the outbreak of the war 2nd Lieut. Appleby was on the staff of Messrs. Bradshaw, Gass and Hope, of Bolton.

Members' Sons.

Bowles, Sub-Lieut. Geoffrey C., R.N.V.R. Killed in action. Son of Mr. Charles W. Bowles (F.). 2nd Lieut. B. J. Bowles, of the Buffs, another son of Mr. Bowles, was killed last September.

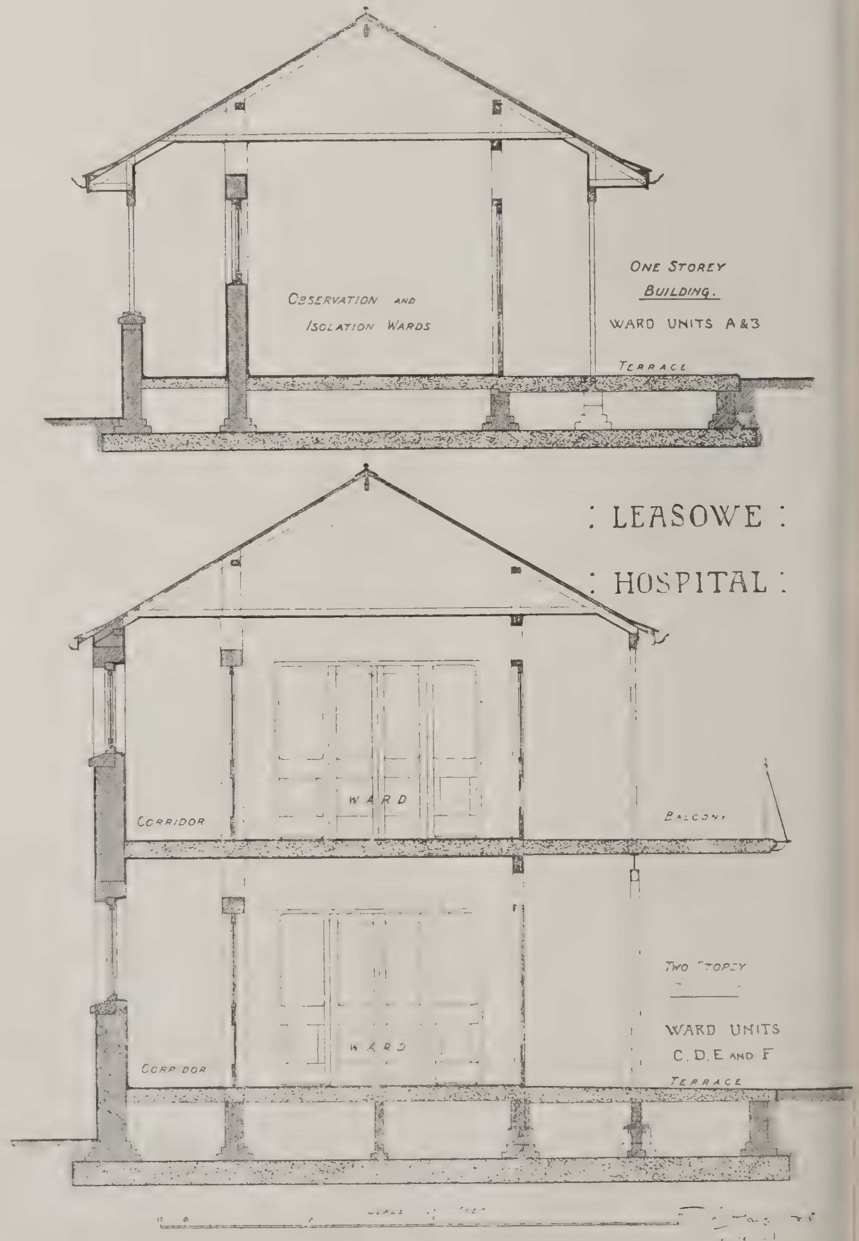
Fellowes Prynne, 2nd Lieut. Norman, Devon Regiment. Reported missing and believed killed in action as from April 24 last. Fifth and youngest son of Mr. G. H. Fellowes Prynne (F.).

Wounded; Awards, etc.

Brigadier-General A. B. Hubback, C.M.G. (F.), was reported wounded in the list issued on July 12.

Lieut. Harry W. Mann (A.), who rejoined the Essex Yeomanry on mobilisation and went to France in November, 1914, was wounded at Hooge in May, 1915, received a commission in the R.F.A. in September, 1915, was wounded at Loos in July, 1916, gazetted lieutenant in January, 1917, and was mentioned in dispatches in June last.

2nd Lieut. E. A. Rahles Rahbula, R.F.A. (A.), has been awarded the Military Cross. "As forward observing officer to his battery he showed great fear-



LEASOWE SANATORIUM, CHESHIRE: SECTIONS OF ONE AND TWO-STOREY BUILD

T. W. HAIGH. ARCHITECT.

LEASOWE SANATORIUM, CHESHIRE: COMBINED UNITS "A" AND "B."

T. W. HAIGH, ARCHITECT.

ss in laying out telephone wires
s the open to exposed posts, from
he directed the fire of his battery.
so showed great skill and resource in
ying enemy entanglements by the
f his battery, and by personal ob-
tion he was able to render the utmost
to his brigade."

Lieut. C. J. M. Young, R.E., elder
f Mr. George P. K. Young (F.), of
, has been awarded the Military
, "He made a strong point close to
age under heavy fire of all kinds. He
nenced work while the village was
ccupied by the enemy. By his rapid
the main position was made secure
counter-attacks." Mr. Young's
ger son, a pilot in the R.F.C., was
g the aviators engaged in the air
the spot where his elder brother was
ting.

ptain Percy T. Runton (A.) was men-
l in the "Gazette" for June 21 for
ble services in connection with the

Serving with the Forces.

e following have to be added to the
bringing the total to 76 Fellows, 523
iates, 321 Licentiates, and 297
nts:

FELLOWS.

r, E. J., Indian Army Reserve of
icers.

LICENTIATES.

son, Gavin, Lieut.-Col., Camero-
ns.
ht, Osborn, A.S.C. Cadet Co.
innon, W., Lieut., London Scottish.
am, P. H., New Zealand Expedi-
nary Force.

STUDENTS.

er, T. J., 2nd Lieut., Northumber-
d Fusiliers.
ison, F. C. S., Durham Light In-
try.

Promotions.

rporal Walter P. Rylatt (A.) has
granted a commission as 2nd lieu-
t in the R.G.A. Special Reserve.
n. Lieut. R. P. Oglesby, Staff
S. (Licentiate), serving in France,
een promoted hon. captain.

o Architects Claiming Exemption.

. Francis Hooper (F.) having sug-
d at the June business meeting that
cation should be made to the autho-
s to allow appeals of architects for
exemption from military service to be adjudicated upon by a tribunal of architects sitting at 9, Conduit Street, the Council referred the matter to the Architects' War Committee. The matter was discussed at the committee's meeting on August 2, but in view of the small number of architects now remaining to be dealt with and the general undesirability of interfering with the ordinary course of recruiting, the committee decided to recommend the Council to take no action in the matter. It was suggested, however, that architects who have strong grounds for claiming exemption should communicate with the Secretary of the Institute, and their claims would then be dealt with and laid before the authorities if such a course seemed desirable.

Working-Class Housing Schemes and Architects.

Having been requested by Mr. Hayes Fisher to appoint a representative of the Institute to serve on the Committee which has been set up by the Local Government Board to consider various technical questions in connection with the building of the large number of houses for the industrial classes that will be required after the war, the President has nominated Sir Aston Webb, who has accepted the position. The other members of the Committee are Sir John Tudor Walters, M.P. (chairman), Sir Charles Allom, Mr. F. Paines, M.V.O., Mr. James Boyton, M.P., Mr. William Fairley, M.Inst.C.E., Mr. G. Marlow Reed, Mr. J. Walker Smith, A.M.Inst.C.E., Mr. J. Squires, and Mr. Raymond Unwin (F.). Mr. E. Leonard, of the Local Government Board, is Secretary.

A committee of the Institute has been constituted by the Council and is now sitting to consider the whole matter of the housing question from the architect's point of view. The committee consists of the President, the hon. secretary, Sir Aston Webb, Professor Patrick Abercrombie, Professor Adshead, Mr. W. R. Davidge, Mr. W. A. Harvey (Birmingham), Mr. Arthur Keen, Mr. H. V. Lanchester, Mr. D. B. Niven, Mr. G. Gilbert Scott, Mr. John W. Simpson, Mr. H. D. Searles Wood, Mr. George Hubbard, F.S.A., and Mr. Percy B. Tubbs. The Allied Societies have been invited to nominate representatives to serve on the Committee. A suggestion by the Manchester Society that separate local committees of the Allied Societies should be formed to deal with local schemes and to keep in touch with the Central Committee in London met with the Committee's approval and they have recommended its adoption.

SIXTEEN CAMPS BUILT IN THREE MONTHS.

More than a million men are now enrolled in the United States Army and fully armed and equipped, and with the exception of those already at the front, they are being trained for war in one or other of America's sixteen great training camps, which have cost nearly £10,000,000. The 7,000 labourers employed have just completed their work.

It is a good instance of American "hustle" that these sixteen areas of grass or waste land have been transformed into camps to house on the average some 60,000 men each in barely twelve weeks from start to finish.

An up-to-date camp which may be taken as typical of the rest covers 2,000 acres of ground, exclusive of parades, manœuvring grounds and rifle ranges. It contains no tents, and the men will live in two-storey wooden barracks, 200 ft. in length, with kitchens and mess rooms, all electrically lighted. The entire grounds are piped for fresh water, and are lighted by arc and incandescent lamps suspended from overhead cables.

Over 4,000 railway cars were required to bring the necessary materials to each site. The bulk of this consisted of 26,000,000 ft. of timber, which required 1,325 cars to transport it; the roofing nails required filled one huge wagon, and nearly 1,000 trucks were required to bring the crushed stone needed for road making.

TRADE AND CRAFT.

"Science and Practice Combined in Waterproofing."

Under this title the Trus-Con Laboratories, Central House, Kingsway, London, W.C., have issued a neat little pamphlet describing the Trus-Con waterproofing paste (concentrated), giving directions for its use, and providing specifications for waterproofing (1) cement stucco, (2) concrete in water towers, tanks, reservoirs, foundations, and similar structures, and (3) basements, tunnels, subways, etc. In the introduction it is laid down that the product developed for effective waterproofing must possess qualities that make it not only positive in results, but otherwise adapted for general use in construction. "It should be very simple to use. It ought readily to mix with water, as water must be its distributor. It should be so economical as to permit of general use. Its result must be permanent. Finally, it must be of such a chemical composition that the strength of the finished structure shall not be one particle lessened, but if possible increased." It is claimed that "Trus-Con waterproofing paste, concentrated" effectively meets all these requirements. Trus-con is a paste which, mixing very readily with water, forms a milk-like solution, which distributes itself evenly throughout the water, and hence is carried uniformly to every part of the mortar or concrete. Its power of repelling water does not weaken with age, but becomes stronger. It is colloidal in its nature, and hence completes the inherent waterproofing tendency of the mortar or cement by filling entirely the voids between the particles, and thus rendering the mass entirely impermeable. Full directions for using Trus-Con are given in the pamphlet, which contains also a number of illustrations of buildings, reservoirs, etc., in which this material has been successfully employed. A list of users includes the War Office, the Admiralty, the Home Office, and many eminent firms of builders, contractors, and manufacturers.

NEWS ITEMS.

Barry Garden Suburb.

Barry Garden Suburb, which has been in course of construction for the past three years, has been formally dedicated, on the completion of the first block of fifty-two houses. Mr. W. Jones Thomas, J.P., chairman of Barry Garden Suburb, Ltd., presided, and Major David Davies, M.P., cut the ribbon at the opening of Westwood Rise.

The Grille of the Ladies' Gallery.

The grille has now been removed from the Ladies' Gallery of the House of Commons. It is understood Sir Alfred Mond (H.M. First Commissioner of Works) has decided that one panel of the grille shall be kept at the House of Commons as a relic of times that have been. Another is to be presented to the London Museum. The remainder of the panels are to be stored and used, if possible, in any future scheme of building in London.

Restricted City Improvements.

The war has put a complete stop to street widenings in the City of London. In ordinary times the annual outlay is anything between £100,000 and £300,000. For the year just reported upon it was only a little over £10,000. How soon there will be a return to the old figure remains to be seen.

Housing in the London Suburbs.

According to a correspondent of the "Scotsman," estate agents in the suburbs of London are just now enjoying a unique experience. Their offices are inundated with inquiries for houses at rentals below £60 a year, but their books are practically empty. In one district thirty minutes out from town by Underground, there are at least two agents without a house to let. Of shops they have an unusually large number, and there are streets with "To let" notices in half the business premises, but houses which a couple of years ago were looked at askance are now no sooner vacated by one tenant than they are occupied by another.

Architects and Air Raids.

Mr. Sydney Perks, surveyor to the Corporation of the City of London, has sent the following letter to the editor of the R.I.B.A. Journal: "Guildhall, E.C.2, August 7, 1917: Sir,—At a meeting at the Mansion House it was decided that the occupiers of certain buildings in the City should be asked to exhibit notices stating that the public could take refuge there. It was necessary to make a survey of the whole city as quickly as possible, and I should like to acknowledge in our Journal the prompt and valuable assistance so kindly given by Messrs. Aickman, Max Clarke, Cross, Davidge, Gosling, Goldsmith, Hornblower, Lanchester, Marks, Martin Saunders, Shepherd, Stevens, Surrey, Lewis Solomon, Stenning, Tubbs, and Wigglesworth.—Yours obediently, Sydney Perks, City Surveyor."

Speedier Placing of Building Operatives.

A joint meeting of the employers and workmen's committees to advise on the work of the employment exchanges in connection with the building trades was held at the offices of the Employment Department of the Ministry of Labour last week, Mr. C. F. Rey, Director of the Employment Department, in the chair. The meeting considered and confirmed certain arrangements which had been agreed to at previous meetings of the separate committees regarding the more rapid placing of workmen in employment through the exchanges, and it was agreed that the arrangements come to should be communicated to the building trade employers throughout the country, with a view to enlisting their co-operation in the matter. The question of the action to be taken by exchanges during periods of trade disputes was also considered.

Dublin Housing.

At a meeting of Dublin Corporation a letter was read from the Local Government Board in reference to the application of the Corporation for sanction to loans of £70,000 and £16,822 for the erection of houses under the Working Classes Act on the sites known as McCaffrey's Estate and St. James's Walk areas. With regard to the first-mentioned scheme, the evidence at the inquiry held by Mr. Cowen, in July, 1915, led the board to believe that the plans for the buildings were to be reconsidered and amended plans submitted. It appeared, however, that the Corporation had now adopted a set of plans for the scheme which were submitted at the inquiry. These plans had many good points, but could be much improved without extra cost, on the lines of later plans for four-roomed houses prepared by the City Architect for the Fairbrothers' Fields area schemes; and, subject to the condition that the plans for the houses to be erected on the McCaffrey Estate would be modified in accordance with the City Architect's later designs for the dwellings referred to, the Board had expressed their sanction to the loans applied for.

Cottages in Rural Districts.

The annual report of the Rural Housing and Sanitation Association, which has just been issued, says one of the greatest difficulties in promoting cottage building has been the inability of the labourer to pay an economic rent for his cottage. On the other hand, if the farmer is to pay a proper wage, his position must be rendered more secure than it has been of late years; in connection with the question of preparation for the period of reconstruction at the end of the war, the committee feel most strongly the importance of building schemes being prepared in readiness for immediate action when peace is declared. They hope that rural district councils will devote serious attention to this matter. If prompt action is not taken as soon as the war is over, a situation of extreme difficulty, even of peril, may arise. It is most urgent that local authorities should make ready in advance for an adequate supply of good cottages for the rural population, so that they may not be found at the critical moment unprepared. The moment for beginning active building operations may occur in some cases before the war ends. The point which the Association wishes to drive home is the necessity for immediate preparation.

SEMI-PERMANENT BUILDING

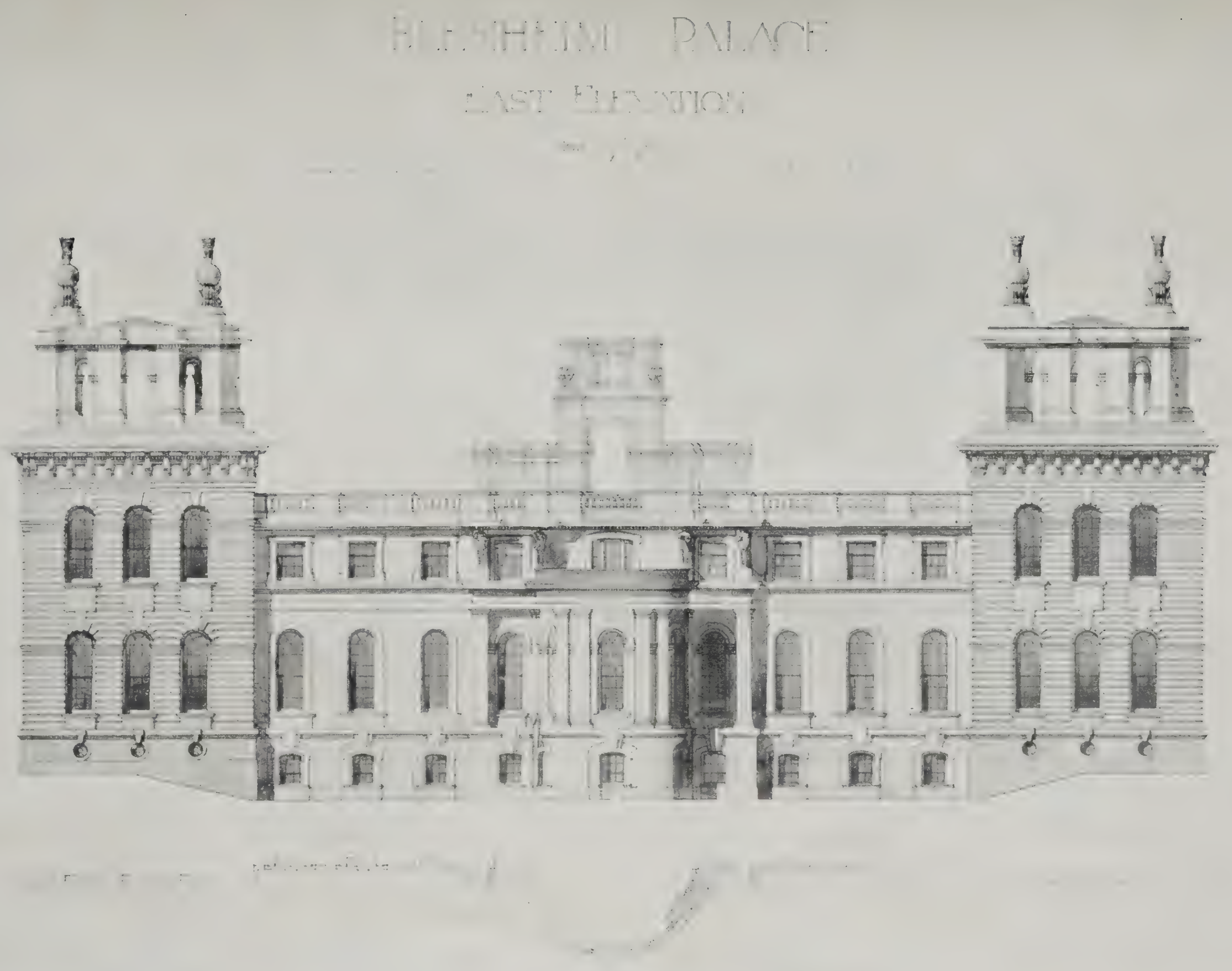
In an article under this heading in " Times" of September 4, it is conte that many buildings, of widely diffe uses, might well be built more cheaply less solidly without being uncomfortabl unsightly. Proportion, colour, light shade, grouping, and the arrangemen surroundings contribute much to the effect of buildings, and they may be g full play in semi-permanent construct There is a margin between the abnorm hasty and light construction necessar war time and the deliberate solidity peace time in which to find a mea sound, light, economical design with ugliness. Architecture, science, com sense, and "push and go" ought to able to combine.

Good appearance goes with simpli good proportions, and carefully arra masses. At the proper time the build must be ruthlessly scrapped. Build can last too long. They can be good vants in their youth and yet bad mas in their old age, when they are too va able, as material, to scrap. A buil which must be used for an organisati was never intended to serve cramps b ness. If it is solid, alterations are ex sive and troublesome, and total demoli is also expensive. Many firms are bu in expensive but out-of-date offices.

Instances of buildings which sh never be built as permanent abound. now possess many examples of semi-per nent hospitals, which in efficiency comfort are not inferior to the big per nent institutions. The large perman hospitals in cities, where sites must cramped, must continue to be constru in a solid manner, but in many other c where land is cheap there is scope lighter work. Hospitals of the che type can be kept up to date, and are elastic. The efficiency of a hospital sists not so much in the materials i made of as in the working of the organ tion, the efficiency and economy of attendance and service. Good plann sound but simple details, good sanita cheerful surroundings are all import and these requirements can be fully in well-designed hut hospitals.

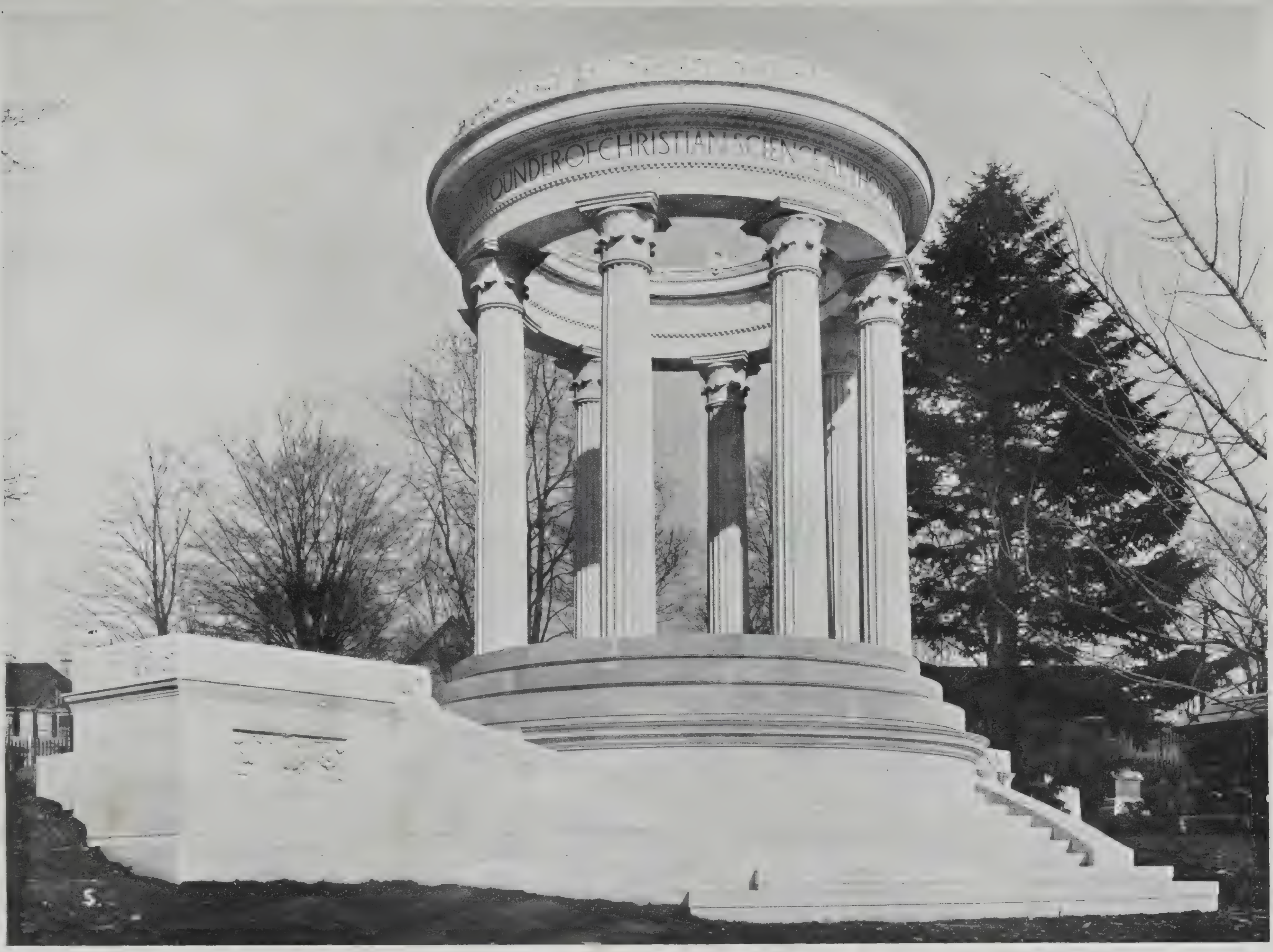
When we come to dwelling-houses find that most small houses are built live in and nothing more. Their att tiveness is just enough to tempt a ten to look inside. The design of each of th little homes depends closely on the so and economic conditions at the time w they are built. Each decade so far deposited a depressing accumulation out-of-date houses, and what is really ar tectural wreckage. These houses radically unsuitable whether as fl shops, or workrooms. It would be un to blame the designers; they could have foreseen what would be anathema the next generation. But they made buildings of lasting and expensive ma rial which is almost as worthless as scra

The country is now several hund thousand houses short. We should see it that this immense building operatio properly done, but it will be distribu over so large an area that its magnit and importance may well escape obser- tion. We do not want jerry-building; we cannot afford to waste time and mo on unnecessary solidity. Cheap, rapi erected, sound, and pleasing homes will required, and the present is the time taking stock of our ideas regarding se- permanent work.



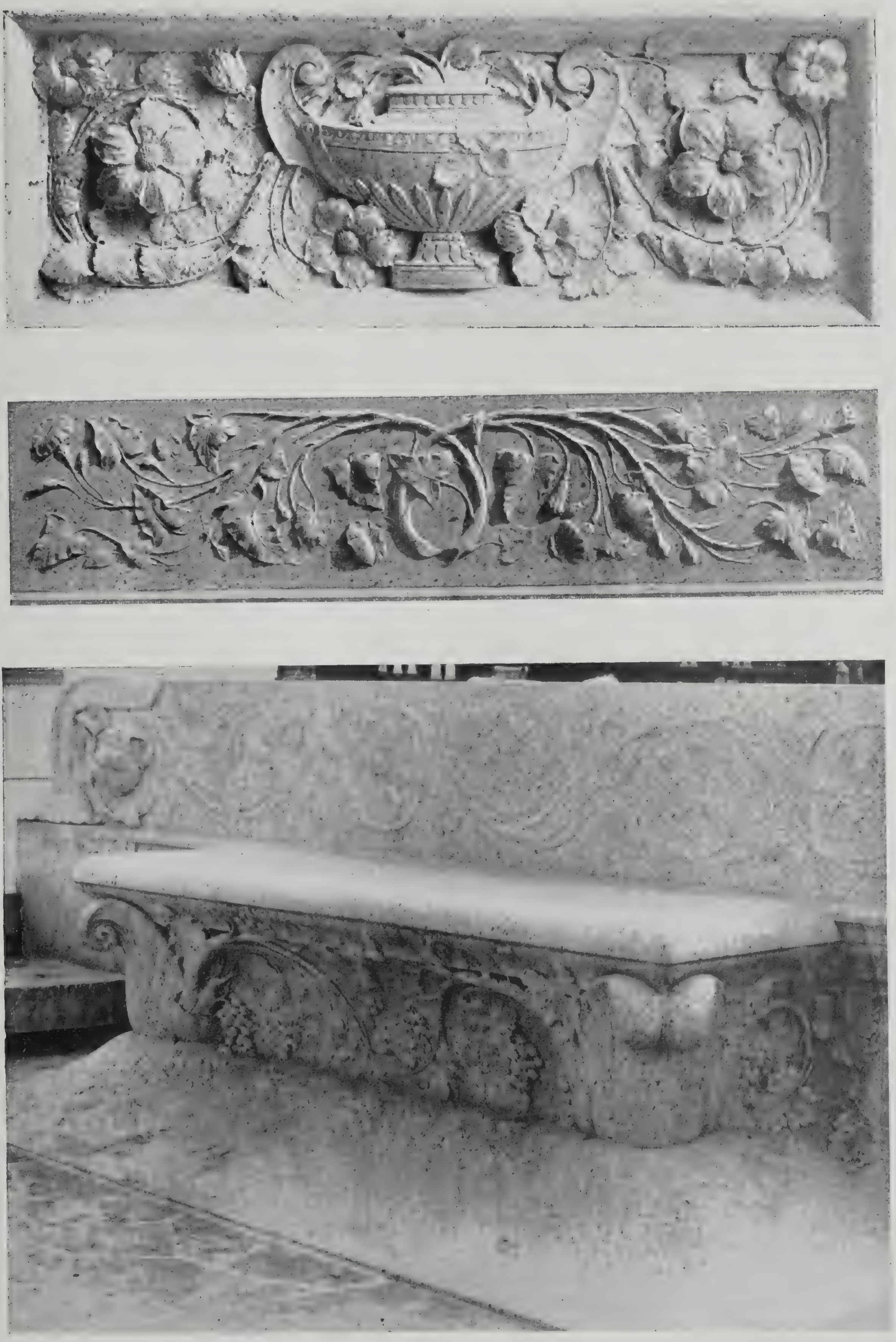
MONUMENTAL ARCHITECTURE (SERIES II.). XXIV.—BLENHEIM PALACE, WOODSTOCK, OXFORDSHIRE: EAST ELEVATION.

(*From "The Liverpool Architectural Sketch Book.'*)



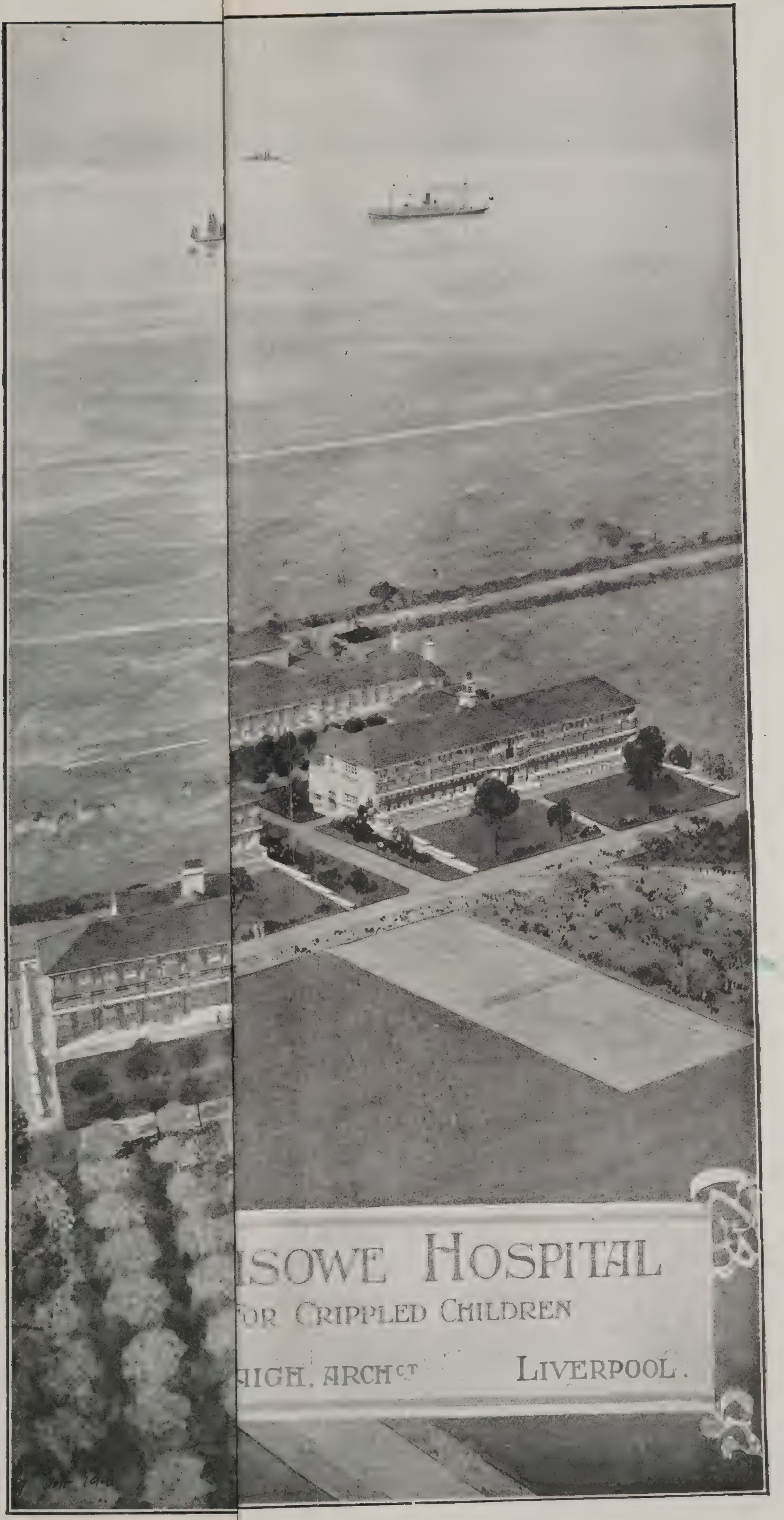
MODERN AMERICAN ARCHITECTURE (SERIES II.). XXXIX.—THE MARY BAKER EDDY MEMORIAL, MOUNT AUBURN CEMETERY, CAMBRIDGE, MASS.

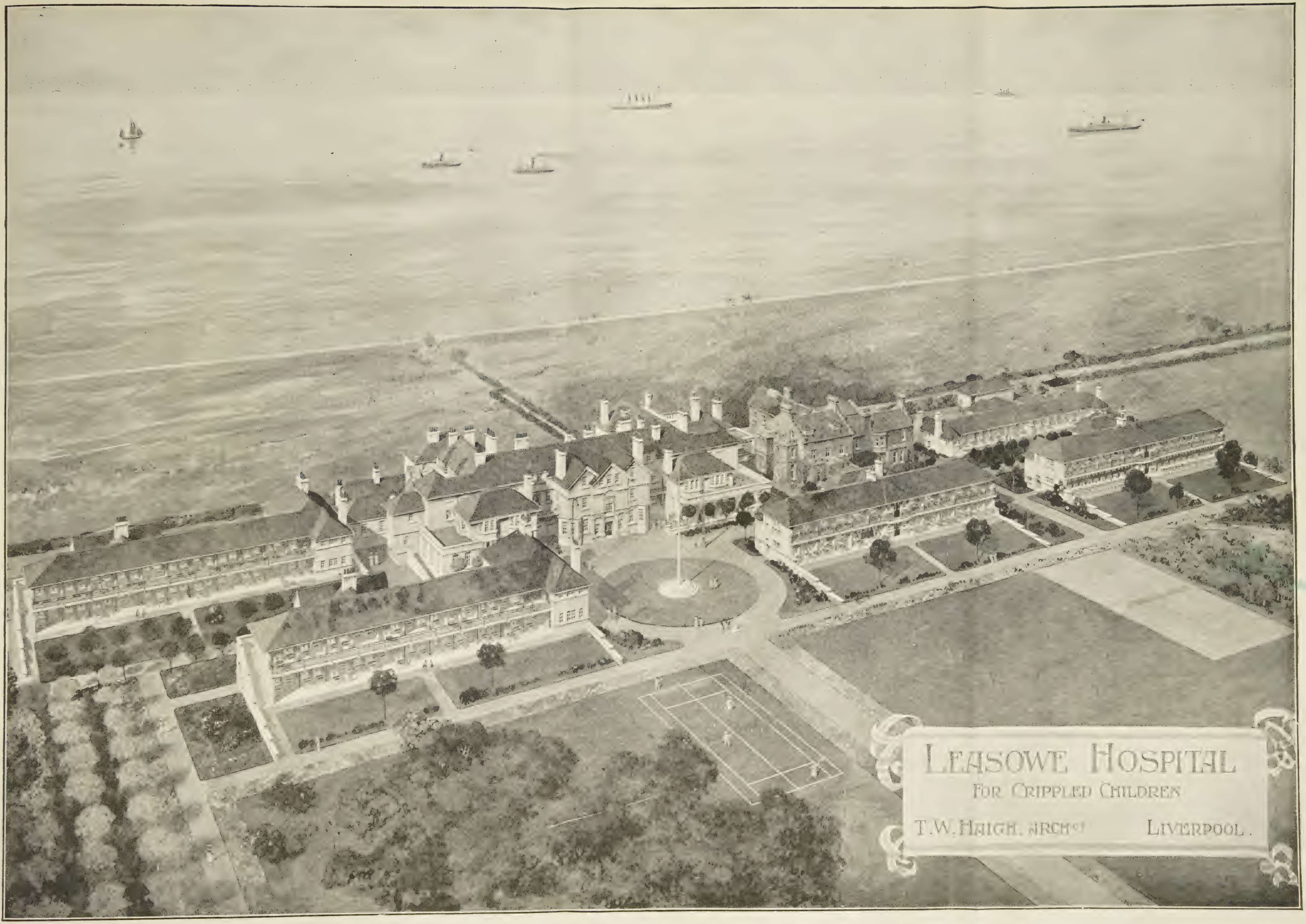
EGERTON SWARTWOUT, ARCHITECT.



DETAILS OF CRAFTSMANSHIP (SERIES II.). XXXIX.—THE MARY BAKER EDDY MEMORIAL,
MOUNT AUBURN CEMETERY, CAMBRIDGE, MASS.

EGERTON SWARTWOUT, ARCHITECT.


ISOWE HOSPITAL
FOR CRIPPLED CHILDREN
IGH. ARCHCT
LIVERPOOL.



CURRENT ARCHITECTURE (SERIES IV.). XXIX.—THE LEASOWE HOSPITAL FOR CRIPPLED CHILDREN.

T. W. HAIGH, ARCHITECT.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

SEPTEMBER 19, 1917. *TOTHILL STREET, WESTMINSTER.* VOLUME 46. No. 1185.

NATIONAL PAPER ECONOMY.

WING to the necessary Government restrictions on paper supplies, all elements of waste must be rigorously excluded. Our readers, we are e, will gladly assist in promoting this object, which ın item in national economy. They can do so ectually in either of two ways—(1) By placing a ect subscription for this Journal, or (2) by constantly taining it through the same newsagent. Casual chases—now here, now there—create a serious dis-pancy between supply and demand, and cause a stage that would obviously be reduced to a mini-m but for the casual and erratic purchasing which earnestly ask our readers to avoid.

is not surprising to read that at the sale of the Hope heirlooms housed at Deepdene Mansion, Dorking, "prices ruled high," and that there was pirited bidding for the antique furniture." Pre-ely what significance attaches to the word "antique" here applied we are unaware; but if, as may be sumed, much of the furniture was designed by omas Hope himself, in the English Empire style, term is not entirely happy; for Hope worked in an sentially modern spirit, although, following his end Percier, he chose for his *motifs* the best forms at he could find in the best periods of ancient ilisation. Hope had the rare felicity of designing love of the work. He was of the select company "divine amateurs," free from the necessity of work-for bread or of pleasing capricious patrons. Wisely oosing Percier for his guide, he otherwise gave free ty to the fine artistic taste which had been engen-red in the house of his father, a rich banker, who d collected at Haarlem a magnificent treasury of jects of art.

* * * *

Thomas Hope was born about 1770 (the exact date s not been conclusively ascertained), and, early hibiting a keen love of architecture, was able to atify it by spending eight years in Italy, visiting o Egypt, Greece, and the East. Further, his wealth abled him to collect a large number of antique rbles (including the famous Hope Athena, of the riod of Phidias), which he at first placed in his house Duchess Street, Cavendish Square, removing them imately to the Classical mansion he built for nself at Deepdene, near Dorking. Hope was t only an amateur in design, but was also a liberal tron of the arts, frequently commissioning, for ample, Flaxman, of whose work specimens were obably among the statuary that has been dispersed the Deepdene sale. One can only trust that the ore precious of the art treasures will remain in the untry. In any case, however, they will no doubt be dely scattered. So far as Hope's own designs are ected, regret at the dispersal loses some of its ignancy when we remember that Hope has left a rmanent record of his peculiarly refined genius in s book on "Household Furniture and Interior ecoration" (1807), from which several plates have en opportunely reproduced in recent issues of this urnal. Hope's great service to art has been neatly mmarised by Mr. A. E. Richardson, who, in an ticle on "The Empire Style in England," in the "Architectural Review" for November, 1911, says that "he attempted to raise furniture design from the rank of a cringeing second-rate art practised by tradesmen to the level of a living and first-rate art closely allied to architecture." There is some slight consolation in the thought that his examples, being scattered, will therefore assume a wider influence.

* * * *

Thomas Hope, it may be assumed, was the pioneer of the comparatively plain interior. It must have been he who started the perhaps rather extreme revulsion from the arcaded, pedimented, corniced, columned, pilastered rooms beloved by Inigo Jones, Chambers, the brothers Adam, and the rest, and reduced us to rectangles. Certainly the meaningless array of functionless forms had been carried to ridiculous extremes for no better reason than that they were thought to follow the precedent of the great masters, or were, at all events, fashionable. Quite small rooms were cluttered up with these adornments, and their abolition gave the middle-class householder an appreciable addition to the air-space in his drawing-room. Very often the huge pilasters were made to a scale that was supposed to be "correct" as a matter of Classical prescription, but was obviously and absurdly disproportionate to the scale of a small house; the answer to this objection being that the Greeks and Romans always observed the same proportions in their columns, independently of the size of the building! That was not always reassuring; and the columns and mouldings were gradually refined until they may be said to have been ultimately whittled away. One cannot regret their disappearance from small houses; and the final disappearance of the pediment from all interiors whatsoever would afford considerable satisfaction to those who believe that the true function of a pediment is to bear off the rain, and should therefore be exercised out of doors. An extension of such purism, however, would rob us of about two-thirds of our decorative devices. Logic can be pushed too far for poor humanity.

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Possibly Hope's fine taste in furniture design led him to exaggerate the importance of furniture. It may be freely granted that the furniture should suit the house; but occasionally it would almost appear that Hope inverted this cone, and was disposed to make the house suit the furniture; which is by no means so absurd as building a barrel to fit a bung. Occasions are not rare on which the gallery is constructed to house the art treasure; and that always the building should be designed for the nicest possible accommodation of its contents is mere truism; but perhaps Hope was disposed to push this principle to an extreme. It will be remembered that one of the plates shown in the Journal a few weeks ago illustrated a room that he had designed for the reception of four Indian pictures. That was a perfectly legitimate proceeding, and was no solecism: but to design tables and chairs in the English Empire style, or any other style, and then build round them, would be to exaggerate the importance of what, after all, are mere appurtenances. From the moment that a chair becomes an object to venerate rather than to sit upon, it should be sent off to a museum, lest a worse thing happen to it.

A quaint simile relating to architecture is worth noting. Writing on the vexed question of the Manchester Infirmary site, the Rev. W. Boyd Dawkins remarks that "each building should be as truly related to the activities carried on within it as a snail shell is to a snail." It is to be feared that the comparison is more striking than apt. A winkle or a whelk, a clam or an oyster, would have served equally well or ill; except that the snail has it for observable "activities," as the rev. gentleman will be very well aware if he is growing greenstuff on a war-time scale; for the slimy gasteropod must now be enjoying the time of his life, and the house he carries on his back must require repeated extensions at short intervals. He seems always to fill it to repletion, and hence, so far from being held up as a model of housing, he should be denounced as a shocking example of overcrowding. He does not leave himself room enough to turn over in his sleep. His attachment to his home is rather touching, but it is as well that he "owns the house he lives in," for any question of "landlord's fixtures" might turn out awkwardly for him. As an exemplar in architecture the snail is, on the whole, a conspicuous failure; his one merit being that he proceeds logically in building from within outwards, deriving the elevation from the plan.

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Possibly the snail simile arose from a sub-conscious association of ideas. *Festina lente* would be the snail's motto if he could choose one; and the Manchester Infirmary site question has not been unduly hustled. We had thought that a design for the building which is ultimately to occupy the site had been selected some time ago; but it appears that the question has been reopened; for the substantive portion of Mr. Boyd Dawkins's letter to the "Manchester Guardian" is a discussion of the type of building that should be adopted. He holds that a building modelled on a Greek temple, while "fitted for the dim religious light of a heathen deity in the bright sunny climate of Greece and Italy"; or appropriate to Edinburgh, "the modern Athens"; or to Bath, "where the dominant buildings are of the Classical style of the latter half of the eighteenth century"; would be unsuitable in the "dull smoke-laden atmosphere of Manchester." He thinks that the British Museum, the buildings at South Kensington, the City Hall in Glasgow, and the Whitworth Institution and the Municipal School of Technology in Manchester, are more meet for imitation. We are disposed to agree with him, with the reservations that "the sunny climate of Greece and Italy" is not exactly duplicated in Edinburgh, which has been called not only "the Modern Athens" but, perhaps more appropriately, "Auld Reekie" and "The Grey City of the North"; and that the British Museum is often held up as a model of Classicality. He adds: "We must clearly define our aims before we build. All the masterpieces of architecture have grown out of the needs of their time. There is no reason why we should not add another masterpiece to meet the present needs worthy of our time and our city." Sound and excellent views; but we were under the impression that a design had been accepted, and that, according to our recollection, it admirably fulfils the conditions Mr. Boyd Dawkins lays down. But what happened before the war is already a dim memory.

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Ladies are still telling us—perhaps more copiously than convincingly—how houses should be built; and the demand for cupboards is so persistent that we feel alarmed for the timber supply. It may be safely assumed that there is not enough wood in the kingdom to give woman all the cupboards she craves. All things are possible to reinforced concrete, and here is a new field for it. Cupboards, according to a one-time popular lecturer—he was a clergyman, and therefor could talk to the ladies with a measure of freedom denied to the rest of us—always smell of mice an tapioca. This impeachment was always met with giggle of assent. Obviously, therefore, it was no regarded as a home truth against the ladies. They would transfer the blame to the architect. If, however it were found feasible to construct cupboards of reinforced concrete, "mice, rats, and such small deer," would be effectually excluded. An alternative would be the steel fitments now so commonly adopted in business houses. They would save much space a compared with wood, and rodents cannot gnaw upon them; and they would not be much dearer than wood at present prices. If ever they are adopted they should be given some less clumsy and more expressive name than cupboards, if only because one grows heartily tired of its iteration.

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Last week we hazarded the observation that ever when a lady gets all the cupboards she wants, they will be in some way fatally wrong. Pat comes the confirmation. A lady writer in the "Daily Sketch" says that "the stupid old-fashioned house, with never a cupboard and as few doors as possible, is a haven of rest in comparison" with the house in which there is a full supply of fitments. "I just have to battle with the 'conveniences,'" she says, "as best I can. When a man sets out to build a convenient house, he always remembers that women grumble at a national shortage of cupboards. So he proceeds to put cupboards in every possible situation. My kitchen and best bedroom are both ruined by capacious cupboards which have been built in the wrong places—which are the wrong shape, and have the wrong kind of doors, which open in the wrong way." There we have it. More than ever it becomes clear that the architect would be unwise as well as ungallant to defend himself against this vigorous onslaught by the ladies, who, it appears, may be very safely left to contradict and confute each other. Our most politic answer to all these complaints is "a patient shrug; for sufferance is the badge of all our tribe." But this "monstrous regiment" of cupboard-clamorous women had better make secure their defences; for we have in training an army of Amazons who will be able to meet them on more equal terms—will fearlessly "speak with the enemy in the gate," or at least at the door of the cupboard.

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More ingenious than useful, we fear, is the latest suggestion for bomb-proof shelters. It is that railway embankments may be pierced with dug-outs. An objection that is anticipated by the author is that the stability of the embankment might be endangered, but this is a difficulty that could be easily overcome. What is more to the purpose is that in present circumstances the provision would be almost useless. Air-raiders attack towns, and railway embankments are mostly remote from centres of dense population. If, unhappily, as some experts suppose, attacks from the air become the leading feature of future warfare, and consequently it will be necessary to distribute civil populations as widely as possible, railway embankments might possibly admit of the suggested adaptation; but they would have the serious disadvantage of offering a special mark to the enemy. As a temporary expedient, the suggestion is almost valueless; and provision for future developments will have to be very carefully thought out in the light of expert knowledge and experience. In the meantime, all the ingenuity that can be devoted to the subject should be concentrated on the problem of protecting civil populations from these dastardly outrages on humanity, and we think that closer attention should be given to the problem as it affects schools.

HERE AND THERE.

A NOTE in last week's issue implies that we are a word-ridden community. It set me searching for an article "On the Hostility to Certain Words" which Mr. Thomas R. Lounsbury, Professor of English in Yale University, once contributed to "Harper." It opens with this passage: "Nothing is more striking in the history of language than the hostility which manifests itself at particular periods to particular words or phrases. By this is not meant the aversion entertained by individuals to certain locutions. This is a state of mind which characterises us all, and rarely if ever does it affect seriously the fortune of the expression disliked. The reference here is to that organised onslaught made by large numbers upon some unfortunate word or construction with the object of driving it entirely out of use." He cites several instances of words at which a dead set has been made, but dwells chiefly on the general objection to "female" as either an adjective or a substantive denoting girl or woman. He shows that the objection is quite modern and quite inexplicable. But the ladies object to it, and that is enough.

* * * *

They object to it witheringly. An advertisement for a "female teacher" brought a shoal of letters not applying for the post, but objecting to the word "female." But the soft sex is hard to please. No sooner had "female" been abandoned to the zoologists than the word "lady" began to excite indignation. It had been assumed by the washer-lady and the char-lady too freely to please the New Woman, who declared austerely that "woman" was good enough for her. Then, unluckily, some graceless wag wrote an epigram about "woman bringing wo to man," and "lady" was at once revived to spite him. "Fare-lady," spoken of a conductress of bus or tram, is a courtly conceit that one must rather admire. Exactly how the balance sways just now as between "lady" and "woman" I cannot pretend to say; but this delicate point will have to be settled before advertising for assistant architects of the superior sex; and I foresee that most untoward complications may ensue upon the addition "with a view to partnership."

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It is a most perplexing problem. A simple solution would be to invent the word "architectress." Were it not so abominably ugly it might be defended as an example of Neo-Grec. "Architectrix" would be no better. There is too homonymous a flavour about the "trix" part of it, which, even if it escaped the vigilance of a suspicious public, would suggest to the male student a generic nickname for the ladies in the school. They would be known as Trixies—a name to which the histrionic art has established a prior claim, but which, nevertheless, the very susceptible male student would find fragrant of the "Blessed Beatrix"; and the same type of fond youth would apply to the lady decorator on duty Coventry Patmore's title of "The Angel in the House." Was the queen of lady decorators, Angelica Kaufmann, really known in her day as "Miss Angel," or was that merely a happy thought for the title of a novel by Miss Thackeray (Mrs. Richmond Ritchie)? By all accounts Angelica had no very angelic temper; but that is neither here nor there. Certainly she must have been very fascinating: for it is said that most men she met fell immediately in love with her, including such unimpressionable persons as Reynolds and Fuseli. Whether or not Fuseli was an attractive man is not proved by the fact that Mary Woollstonecraft fell violently in love with him. It was a confirmed habit of Mary's, exercised on a new object at intervals of six months or so. Mary would have been delighted with the manly strides that women are taking to-day; for was she not the mother of all such as assert women's rights?

* * * *

To get away from the ladies and come back to words (which is to speak paradoxically; for I remember a hard saying in the current issue of "Drawing and Design," in which it is said of a typical lachrymose lady: "She would be a credit to any funeral: if it were not impossible to imagine a mute woman, it would be easy to imagine her a woman mute"), It was a professor who called attention to our supersensitiveness to the effect of words. We must be careful, for example, how we use the words "social" and "democrat." In certain assemblies, it appears, they are tabu. Those assemblies must not be hastily set down as woefully old-fashioned. A word that is more than a word—is a symbol or formulary for a complete system of approved prejudices—has lost its primitive innocence as well as its primary significance. It is a dangerous thing to handle. Such words ought to be placed in an *Index Expurgatorius*, or at least marked with a dagger in the dictionary. In the Council Chamber of the R.I.B.A. there should be exposed a "List of Words and Phrases that We May Not Use." A full list could not be affixed to the walls. It would make a tolerably stout volume. It would include "The Mistress Art," "Grand Manner," "Architectural expression," "Simple and dignified treatment," "Scholarly interpretation," "Reliance on mass and proportion." . . . Nobody would ever venture to say anything whatever, for fear of "putting somebody's back up." Consequently the Council would lapse into complete dumbness until the Lady Fellows restored the gift of tongues.

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That same word Professor is dangerous in the handling. You never know in what particular instance its use or its omission will be deemed the unforgiveable sin. A, having read his Ruskin and his Matthew Arnold, has an ineffable scorn for it, refusing to class himself with phrenologists, conjurers, and boxing instructors. B, on the other hand, will write you an angry reminder that he is not Mr. B, but Professor B, of such-and-such a university; or of some mechanics' institution that has got itself affiliated to a university. So also with Doctor; except that it is always safe to apply this prefix to the medicine man, just as it is never untoward to address a police-constable as Sergeant, unless he happen to be a cut or two above that honourable grade. How they get on in Germany, where everybody is either a professor or doctor, and where the case is horribly complicated by the Frau assuming her husband's title, one can only faintly imagine, but, anyhow, it serves them right. One could wish that all such invidious distinctions were abolished in this country; instead of which the powers deliberately augment them by the addition of "Dame." Anyone suggesting that these observations are democratic is hereby reminded in advance that democratic and social are forbidden words. No really respectable dictionary would harbour them. Eheu! what a grimly funny world it is!

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In the industrial world they are perhaps less squeamish about words. Their language, like that of Mr. Bill Nye, is "frequent and free." They do not object to the rather invidious distinction (as it might seem to the fastidious) between "masters" and "men." They raise not the cavil of the courts *in re* the officer who objected to counsel's reference to "this soldier" with, "I am an officer," and was not over-pleased with the amendment—"Very well, then—this officer who is no soldier." One does not hear that employers object to the monopoly by operatives of the term men, although the "men" sometimes murmur at the word "masters"; but what to do? "Employers" and "employees" may wear an air of greater correctitude, but do not tend less to cacophony than to economy; besides, the printers always like to render employee French fashion, with an accent, as if friend Bricky were "a clerk foredoomed his father's soul to cross, and pen a sonnet when he should engross." And "employé," look you, must be altered for the indication of femininity; and when the ladies who have invaded the building business in all its reaches insist on this distinction, away goes "men" as a collocative (my coinage, I fear; pray pardon it), and the printer will find that his attachment to the French form will create a difficulty for him. What plural can he give it that shall include both sexes? He must fall back on the time-honoured English form "employees." Indeed, the vocabulary of the building trade will have to be considerably revised in the interests of the ladies. Some of the technical terms handed down to us by our rude forefathers are unnecessarily vivid. Now is the time to scrap them with the rest of our antiquated machinery. But we cannot hope to get away from the tyranny of words. If they do not exercise it in one way, they will in another. As Addison said in the "Spectator," "Words, when well chosen, have so great a Force, that a Description often gives us more lively Ideas than the Sight of Things themselves. The Reader finds a Scene drawn in stronger Colours, and painted more to the Life in his Imagination, by the help of Words, than by an actual Survey of the Scene which they describe. In this case the Poet seems to get the better of Nature." I seem to have detected a tincture of poetry in descriptions of estates for sale. But poetry is all-pervasive.

DIOGENES.

THE PLATES.

Architectural Ideas in War-time.

IT is an excellent exercise of the memorising and the imaginative faculties to employ them after the manner of the architect on war service whose fourth sketch we reproduce this week. It may be supposed that one's best ideas remain as it were in solution, failing the stimulus that would crystallise them. Eventually they perish unrecorded, remaining inchoate even in the possessor, and virtually non-existent for those whom their portrayal might have helped. There is no waste, it is said, so great as the waste of thought. We are glad, therefore, that this particular architect is giving us the visible presentment of his day-dreams—"and as imagination bodies forth the forms of things unknown, turns them to shapes, and gives to airy nothings"—but there the quotation stops, for the artist declines to give his creations "a local habitation and a name." He prefers that their application should suggest itself to the mind of the beholder.

Doorways in Ashburnham House, Westminster.

It is generally agreed that much of the interior work in Ashburnham House is unsurpassed for serene beauty, and to this effect the staircases and the doorways are chiefly contributory. On the first floor the suite of rooms comprising an ante-room and the great drawing-room which is now the library of Westminster School is, it has been said, "perhaps as beautiful as anything could well be." A fine piece of carved and pierced work forms a fanlight to the door leading fro the stairway to the ante-room; and the carved enric ments to the doorway shown on the other half of th plate are of great delicacy. With regard to much the work that is commonly attributed to Inigo Jone the question usually arises whether it was really who did it, or whether it was executed by his henc man Webb. In this case the same point has been dispute, but it seems certain that Inigo Jones was th designer, although Webb may have been entruste with its supervision.

"Upton," Frithwood Avenue, Northwood.

This house, at Northwood, Middlesex, was cor pleted in the latter part of 1915 for Mr. A. Taylor, occupies a site of about an acre, and was designed as complete little family residence for a City ma Compactness and convenience have been studied, reduce domestic labour. The principal rooms su round the entrance hall, which is entered from a logg carried out in Bath stone; the kitchen, pantry, bac staircase, dresser, and stores are all placed as conven ently as possible for serving to the dining-room. the first floor are provided four spacious bedroom with a good dressing and bathroom; and on the secon floor a bath for maids and three bedrooms, makin seven bedrooms in all, while three boxrooms are pr vided. The object has been to utilise space to th utmost advantage, to reduce the cost and economi domestic labour. As the position is rather an expos one, the outer walls are faced with hand-made san faced bricks. The walls on the south and west sid above the ground floor were rendered inside wi "Pudloed" cement for the first coat of plaster, an finished in Parian. This has rendered the interi perfectly damp-proof. By studying economy in eve way, the cost of the house in 1915 was very little abo pre-war rates. The house was designed and supe vised by Mr. George E. Clare, M.S.A., of Harrow.

Blenheim Palace, South Elevation.

It is said that the best way of learning languages by means of re-translation. It was the method recor mended by Ascham in his "Scholemaster." Yo turn Tully into English, and, after a while, turn yo English into Latin as much like Tully's as you ca contrive it. Something comparable to this is seen the exercises of the architectural schools. You stuc the buildings that are worth it, thus acquiring first all the power of observing good design; accura coming through actual measurement. Then com the secondary advantage of seeing what the buildin looks like on paper. Conversely, and almost inse sibly, the power is acquired of knowing how a drawin will look when translated to three dimensions. It Ascham's method with the slight difference tha having measured and drawn Blenheim Palace, fo instance, one is not immediately required to re-ere the building. Still, the principle holds good, an therefore of the making of measured drawings the is no end. Our plate of the south elevation of Blen heim Palace is by Mr. H. C. Mason, of the Liverpo School of Architecture, and is reproduced, by permi sion, from the "Liverpool Architectural Sketch Book An article on "Sir John Vanbrugh, Blenheim, an Woodstock," appeared in our issue for July 18, and portrait of Sir John appears on p. 38, July 25. O those two dates, plates were published showing phot graphic views of the elevations, and in last week's issu a measured drawing of the east elevation was shown

Extensions to St. Thomas's School, Bath Row, Birmingham.

The schools to which this working-drawing refe are described in the article on p. 129. We belie that Messrs. Harrison and Cox, the architects, a entitled to the credit of having built the first rei forced-concrete school in England.

THE OPEN GRATE TRADITION.

UTTING back the clock from summer time to
solar or mean time last Sunday was a reminder
that soon the domestic hearth must be aglow
in; and already there is in the air a touch of sharp-
s which renews anxiety about the coal supply—or,
it comes to the same thing, the difficulty of getting
black diamonds delivered. Those of us who have
stoves in the house are free from the worst fore-
lings; but we know that we should miss terribly the
ery and homelike aspect of the English fireplace,
steful and unscientific as it may be in conception
l construction.

Even in America the old tradition has never quite
d out, and it seems at the moment to be regather-
force. In the "Christian Science Monitor," which
published at Boston, U.S.A., there is a charming
ture of "a fireplace of American Colonial days,"
l the article that accompanies it begins with the con-
sion that, with that recurrence to the customs and
ivities and trappings of earlier days which is so
aracteristic of these times, the fireplace is regaining
en more popularity than it probably enjoyed in the
ars when Benjamin Franklin was busy inventing
iron stove.

The old-fashioned brick or stone fireplace, in its
mitive state, was nothing more nor less than a sort
a frame for the fire, which was moved into the house
ien the earliest people forsook a life spent altogether
the open and built for themselves rude dwellings.
ien, instead of going out of doors to do their simple
oking, they moved their fire indoors, too, for greater
nvenience.

In those early days nobody bothered about a
imney; the smoke from the fire made its way out
rough a hole in the roof, a simple exit. The chimney,
fact, so the antiquarians tell us, was not heard of
til somewhere about the twelfth century. The real
eplace, as we know it, is said to be the first of all the
odern systems of heating houses. Its modernity,
wever, extends back to the Middle Ages. Historical
vels give us vivid pictures of its enormous size and
e uses to which it was put.

The first real fireplaces were doubtless built of heavy
asonry, and were exceedingly utilitarian structures.
ome time elapsed before anyone seemed to possess
fficient interest in interior decoration to grasp their
chitectural possibilities; but, when those possibilities
ere at last recognised, then came the elaborately
rved wooden or marble frames for the fireplaces with
e long shelf above, which, in their later forms, were
iown as mantels.

When the Pilgrims went to America and set up their
omes there, they naturally built in the sort of fire-
aces to which they had been accustomed in their
nglish homes. But, of necessity, theirs were of
treme simplicity. And the beauty of it was that, as
ey grew more prosperous, they kept those simple,
aceful characteristics which we associate with the
rniture and house fittings of American Colonial
ys.

These fine old fireplaces were to be found in most of
e New England houses of the seventeenth,
ghteenth, or early nineteenth centuries. They were
ostly built of brick, with a solid wooden framework
itside and a simple, long, narrow shelf above. The
earth, also of bricks, stretched out well in front of it
to the neatly sanded floor, and at one side was
broad settle. These settles were usually built with
gh backs, to protect the sitter from the cold beyond
e sheltered chimney corner. For the fireplaces,
hile they gave out plenty of comforting warmth in
eir immediate vicinity, were not successful in heating the other parts of the room. The andirons, with their ball tops, were of the simplest, and a swinging crane was fitted with pothooks, from which iron or copper vessels were suspended over the fire.

The andirons and kettles and other fireplace furnishings were oftentimes of iron and often, too, of brass and copper, and the designs were usually of extreme simplicity and dignity.

In some old New England cities and towns, in Boston, Salem, Portsmouth, and Deerfield, for example, there may be seen to-day some remarkably beautiful old fireplaces rich in carving. Both wood and marble were used for the mantels. Later tiles were added to its decoration, and, also, what were known as firebacks, made usually of iron and variously ornamented, sometimes with the family's coat-of-arms.

Then came stoves. What they lacked in beauty and picturesqueness they made up in utility. It is said that they were really invented in Alsace, just two years before that adventurous Christopher Columbus discovered the continent of America. However, they did not burst into popularity and common usage until toward the middle of the eighteenth century.

That was the time when the fireplace is believed to have reached the height of its decorativeness and to have won the highest artistic appreciation.

It was in the year 1744, so historians tell us, that the energetic Benjamin Franklin invented an open stove or heater of cast-iron, which, standing out in the room as it did, well away from the chimney, but connected with it by a pipe, succeeded in projecting its heat in front of it, behind it, and out at both sides, thus making the apartment as a whole a much more comfortable place to live in than the more beautiful and picturesque but in this way less effectual fireplace had been able to do.

With the advance in popularity of the stove came the decline of the fireplace until, now in this twentieth century, with its revival of artistic impulses in the home, the fireplace with its simple, dignified mantel, although minus its array of crane and kettles, is being sought again, not primarily as a means of heating but rather as a delightful and enjoyable decorative feature.

Thus far the American writer, who, however, says nothing of the recent improvements that, like the well-fires and various forms of gas and electric heaters, preserve to a greater or less extent the homeliness of the dearly loved fireplace, while making for vastly superior economy and cleanliness. Now that fuel-economy is imperative, these inventions should largely supersede the old wasteful grates of obsolete pattern. While voracious of coal, they throw most of its heat up the chimney, and it is high time they were scrapped, more especially since the homely sentiment they are supposed to represent is, as we have said, by no means exclusively theirs.

There are in existence in this country many survivals of early fireplaces, but as they are seldom freely accessible, it may be useful to mention that a most interesting example is preserved, and is open to public inspection, in the museum of the Brassey Institute at Hastings. This comprises not only a fireplace and an ingle-nook, taken from an old Sussex mansion, but also a complete array of andirons, dog-irons, cooking vessels, roasting and toasting apparatus, etc., although we believe that these items are not all from the same place nor of the same period. They conjure up, nevertheless, a very vivid impression of the hearths and homes in whose defence our forefathers fought so sturdily.

NEWS ITEMS.

Death of Mr. T. Easten.

It is with deep regret that we record the death of Mr. Thomas Easten, of the firm of Messrs. Stephen Easten, Limited, builders and contractors, Milburn House, Newcastle, and eldest son of Councillor Stephen Easten, J.P. Mr. Thomas Easten, who was only thirty years of age, caught a chill and pneumonia supervened. He is survived by a widow.

The Hope Heirlooms.

The disposal of the Hope heirlooms and furniture in Deepdene Mansion, Dorking, was resumed last week. The catalogue comprised 2,000 lots, besides Greek and Roman statuary, and included valuable Empire furniture, 2,000 volumes of books, and the appointments of forty bedrooms. There was spirited bidding for the antique furniture, and prices ruled high.

Prospective Improvements at Withernsea.

At a meeting of the Withernsea Council, Councillor Hinchcliffe asked if the Council would entertain an offer to let the Pier Towers after the war, and allow a building to be erected seaward on the existing piles, presumably as a pavilion for entertainments. The promoter was interested in similar concerns in other resorts, and had plenty of money behind him. A favourable reply was given.

The Government and the Slate Trade.

Mr. Walter D. Hobson having written to Mr. Leonard, the secretary of the Housing (Building Construction) Committee, Whitehall, asking him to arrange that a small deputation representing the North Wales slate industry might attend before his committee at an early date in order to give evidence as to the many advantages that may be derived by using natural slate as a roofing material, Sir Tudor Walters, the chairman of this committee, has approved of the suggestion, and no doubt a date will shortly be fixed.

St. Ann's, Newcastle.

St. Ann's Church, City Road, Newcastle, the 149th anniversary of the consecration opening of which was commemorated last week, was built in 1768, on or near the site of an older chapel, with stones which had formed that part of the town wall which ran along the Quayside. In 1826 it was found necessary to rebuild the steeple, the upper part of which had declined from the perpendicular and was in danger of falling. The stones of the old town wall used in its erection were then removed and larger ones substituted.

Thomas Parr's Cottage.

The cottage of the remarkable old man, Thomas Parr, who lived during the reigns of ten Kings and Queens of England, is being sold by auction at the George Hotel, Shrewsbury, on the 21st of this month. Thomas Parr is reputed to have been 140 years old at the time of his death, and quite the longest-lived man our race has produced. The cottage in which he lived is therefore of special interest, and it is hoped will pass into the hands of someone who will preserve it from destruction. It is at present owned by Sir Clive Phillipps-Wolley, who is selling his Shropshire property.

Pontefract Housing Scheme.

Although the Pontefract Corporation erected 250 houses a short time before the war broke out, the housing question is again becoming acute. In consequence of an intimation from the Local Government Board that where housing schemes are required financial assistance will be given to local authorities taking steps to carry out the same on the conclusion of the war, the Corporation has decided to prepare two schemes for the erection of a further 300 houses. The scheme provides for the purchase of two plots of land in Wakefield Road, both of about ten acres, one at a cost of 1s. per square yard, and situated next to the barracks, and the other lower down Wakefield Road. This is estimated to provide 120 houses on each site, and the remaining houses are to be erected in the neighbourhood of Old Church.

Housing at Hartlepool: A Communal Kitchen.

Hartlepool Town Council has decided to continue the communal kitchen which was opened some little while ago, and which, it was stated, had met a decided need in the town. The Deputy-Mayor mentioned that up to the end of August there was a deficit on the kitchen of £38 7s. 11d., of which £29 14s. 2d. represented initial cost. During the last six weeks the kitchen had rather more than paid its way, and it was intended to effect a further saving by dispensing with one of the paid assistants and substituting voluntary service. The various housing schemes of the Corporation were referred to and progress reported in clearing the slum areas, on which it is proposed to rebuild. The Deputy-Mayor in this connection stated that fifty-six houses had been pulled down in the Cleveland Street area and eighteen in the Durham Street area.

SIR T. G. JACKSON'S SALONIKA MEMORIES.

In an interesting letter to "The Times," Sir Thomas Graham Jackson, R.A., who, it will be remembered, has travelled much in the Balkan States, writes:—

My knowledge of the place goes back not only before the fire, but before the Balkan Wars, when the Young Turks were in the first flush of victory, and were being hailed as the apostles of a new and regenerated Turkey. That was a happy time for students of architecture and antiquity, both at Salonika and Constantinople. One could wander about alone with sketch-book and camp-stool where one pleased: no one shouted "Shaitan," and if an occasional stone was thrown the Turks assured one the hidden culprit must have been a Greek. Probably at no time was access to the ancient monuments of the country so easy as during that happy time, all too brief.

At Salonika East and West meet. Along the sea front, whence you look out upon the Thessalian Olympus, are hotels and modern houses, warehouses and magazines, in the uninteresting style of European civilisation. Behind is the old town piled up on the steep hillside, full of the mystery of the Moslem world. A good wide street runs through it from end to end, spanned by an arch resting on piers covered with late Roman sculpture; but little or nothing remains of ancient Thessalonica on which the eye of the great Apostle of the Gentiles could have rested. Round the back of the town the Venetian walls still run, starting originally from the White Tower on the shore at the east end, though they do not now reach it. At the west end of the main street was a fine gateway largely composed of fragments from ancient buildings; but it was pulled down, within a month after I had sketched it, by the Young Turk in the fervour of his newly awakened zeal for progress enlightenment, in order that a tran might run over its site.

At every turn one came upon old B tine churches turned into mosques. Sophia, then in process of restoration a fire, was the ancient Cathedral. I some of the most lovely mosaics I ever seen, and capitals, imported no from Proconnesus, of the purest Byza delicacy. Still finer are, or were, tho St. Demetrius, that splendid basilica destruction by the late fire makes an parable gap in the history of the We are told only the bare walls rem walls, when I saw them, lined thro out with lovely marbles and pric mosaics. The splendour of the int almost passed belief. The round ch of St. George, reminiscent of the theon at Rome, has mosaics in the with a circumference of seventy-two y The mosque of Eski Djuma, whose C tian dedication is forgotten, is a su basilica with marble columns and del Byzantine capitals, supporting arche which mosaic still clings, though, as to draw, tesseræ of gold, sapphire, ruby every now and then fell with a g patter on the ground. High up on the side is the church of St. Elias, who, St. Michael, was always honoured on site nearest to heaven; and in another of the town is the Dodec-Apostol, Souk-su (cold water) mosque; bot them churches in a later style, with f brickwork arranged in the walls in terns of frets, vandykes, guilloches, circles; a kind of ornamentation imit in the Serbian churches of the fourte and fifteenth centuries.

At Constantinople the Christian mos have to be hidden; even the simple c in the apse of St. Irene is covered wi veil. But no such scruples obtain at S nika. The mosaics are exposed to view, and the Turks were even searc for more of them when I was there. the Moslem at Salonika is somewhat Half of the 150,000 inhabitants are J refugees like those living near the Tek Serai at Constantinople, who were dri out of Spain by the Catholic zeal of Fe nand and Isabella. They still speak t old Castilian tongue. "You accuse Mussulmans of intolerance," say Turks. "Who gave shelter to these J when the Christians drove them exile?" A large part of the other hal the population is composed of Greeks other foreigners, and the Turk, though took care to show he was the master, in a small minority. The mosques see seldom used. One old hodja would c and spend his time in St. Demetrius, ting cross-legged in a pulpit, but I ne saw him do anything but read the ne paper. Our friend Hassan-Tahsin, c todian of that building, whom we visi to drink coffee and play with his little and girl, was a Dervish, and danc "Why do we dance?" he asked. "T Protestants don't dance, nor the Cathol nor the Greeks, nor the Armenians, we dance. Ah! that makes a man thin" In the church is the grave-slab of De trius; and he showed us, first putting piece of paper on the stone because of dust, how the Russian pilgrims, the Or dossi, came and laid their cheeks on marble and cried and cried "Ai! Ai!"

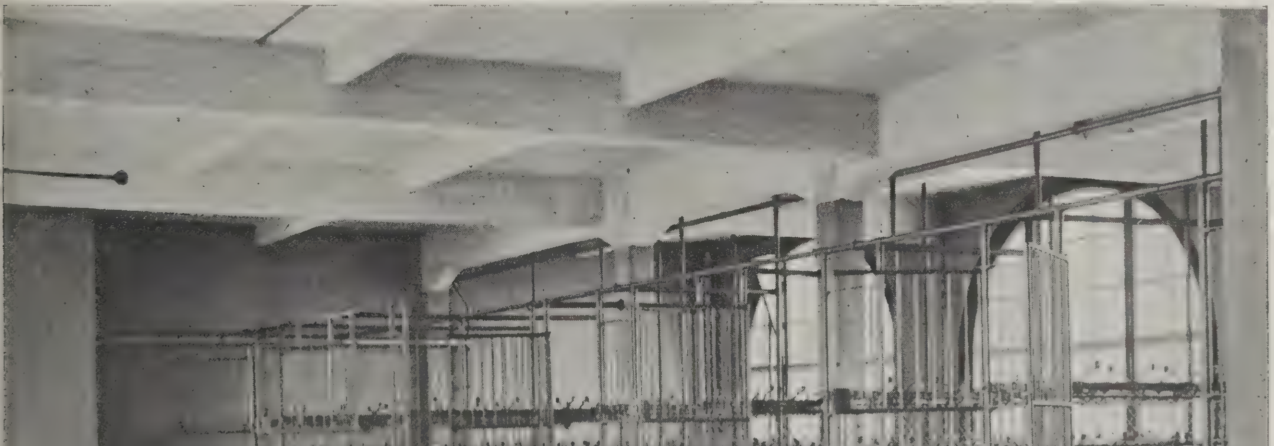
How much of all this, that made Sa nika a place of charm and delight, survive this present hideous war, wh has wrought such destruction among monuments of art in France and Ita and now, whether by accident or mal we do not know, in this scene of c pleasant travel only seven years ago?

WAR·BVILDINGS·SECTION

BOMB-PROOF SCHOOLS AT BIRMINGHAM.

E schools founded nearly ninety years ago by the important parish of homas's, Birmingham, are the largest ch of England schools in the city, the additional building, which was ally opened by the Bishop of Birham in July last, is characteristic of atest developments in design, contion, and equipment. Being built in reinforced concrete throughout, it possesses the double advantage of being both fire-proof and bomb-proof.

At the time of their establishment, in the year 1831, the schools, situated near St. Thomas's Church in Granville Street, consisted of a two-storey building for the boys' and girls' departments and a one-storey building for infants, the premises affording accommodation for about 700 scholars. In 1871 the infant school was rebuilt, and the other departments were remodelled at a cost of some £1,912. Two successive enlargements were carried out in 1892 and 1894 at a cost of £2,479, on a site in Bath Row presented by Mr. J. W. Lea. In 1907 further additions were made in Chequers Walk at a cost of £2,900, the



EXTENSIONS TO ST. THOMAS'S SCHOOLS, BATH ROW, BIRMINGHAM: CLOAK ROOM.

HARRISON AND COX, ARCHITECTS.

requisite site having been the gift of the same generous donor.

In 1890 the roll included 861 scholars, and the numbers increased steadily year by year until in 1916 the schools were attended by 1,493 scholars. Owing to the increased numbers and the requirements of the Board of Education additional accommodation became necessary, and the writer's firm, Messrs. Harrison and Cox, were commissioned to prepare the scheme which has been realised by the completion of the present extension.

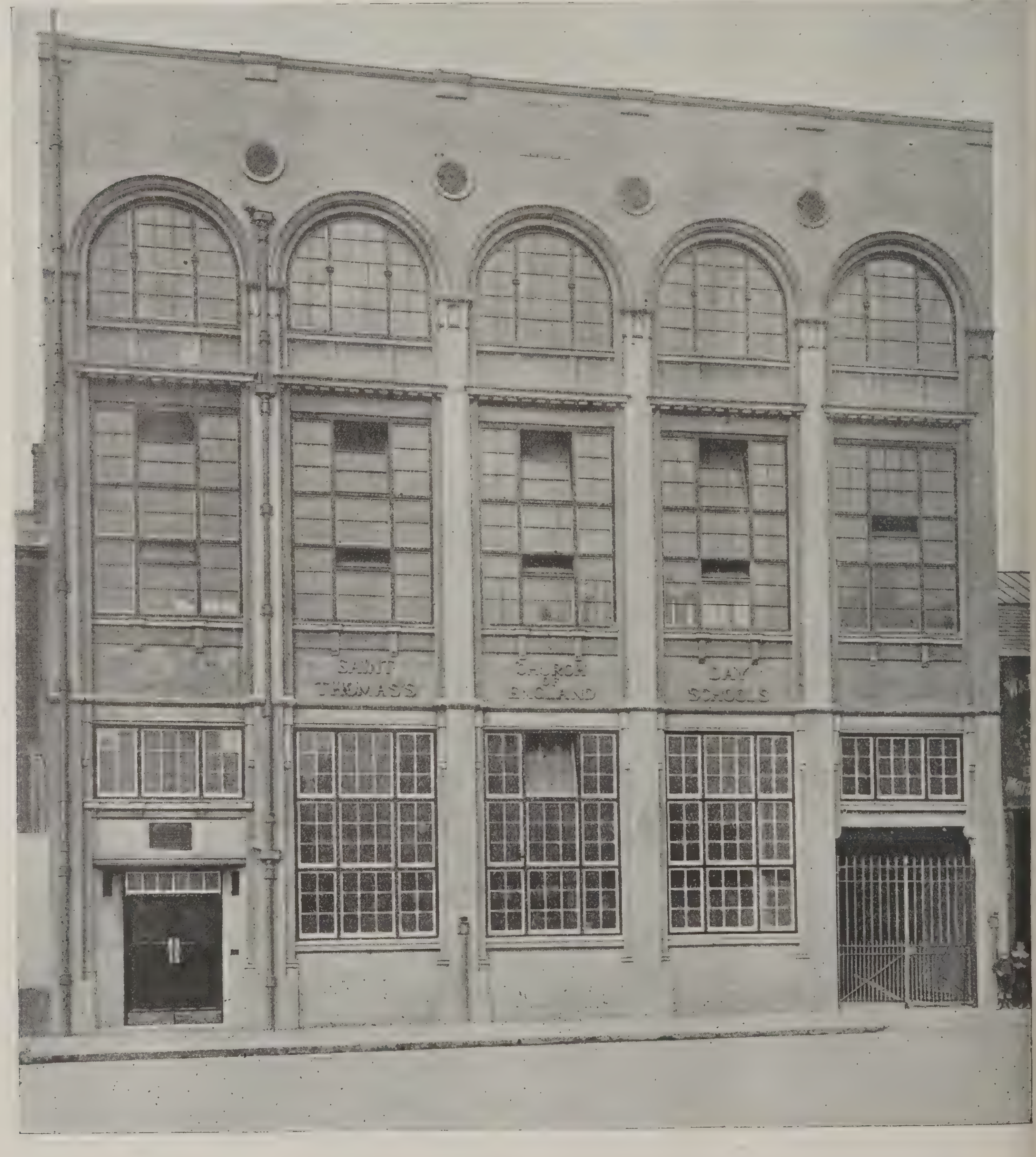
This project provided for a three-department school, with ample accommodation for 700 senior mixed scholars, 422 junior mixed scholars, and 400 infants, or 1,522 scholars in all. In view of their extensive accommodation and central position at the corner of Bath Row and Granville Street, in the centre of the city, the schools may justly be regarded as among the most important of the educational establishments in Birmingham.

The difficulties in the way of acquiring adjoining property for school extensions in built-up and populous districts are often insurmountable, and in the case of St. Thomas's Schools, the sole available site for the new building was of a very restricted area and joined the old premises only at one narrow end. This condition naturally affected the planning of the extension, and led to the adoption of reinforced concrete for the construction of the building.

In view of the accommodation required to meet the varying and increasing needs of the schools, and of the narrowness and restricted area of the site, this system of construction has certainly given results far more satisfactory than those which could have been secured by the use of any other method or material.

The interior space gained by subs ing a reinforced concrete structure thin exterior walls for an ordinary buil with massive brick walls, was in thi stance a consideration of the highest portance. The customary objections lofty building for school purposes eliminated by the fireproof nature o construction adopted, which was ap to the entire fabric, including the spa staircases connecting all the floors an terrace roof; the latter as well as the ture generally affording safety from a by aerial bombs as well as from inju fire. Another advantage gained by adoption of reinforced concrete was facility offered for the provision covered playground under the classr and of two open-air playgrounds for on the terrace roof.

The new building is linked up wit old schools by a reinforced concrete



EXTENSIONS TO ST. THOMAS'S SCHOOLS, BATH ROW, BIRMINGHAM: ELEVATION TO GRANVILLE STREET.

HARRISON AND COX, ARCHITECTS.

, which serves the different levels of
boys' departments, while the girls'
artment is reached by the main
ance in Granville Street.

s shown by the illustrations, the eleva-
to Granville Street is of simple but
ropriate character, suggesting at once
material of which it is constructed, a
worthy feature being the proportion-
y large window area in the façade.

ver the chief entrance is fixed a bronze
et to the memory of Mr. H. R. Birch,
late headmaster, to whose indefatig-
efforts during the past quarter of a
tury the schools owe so much of their
cess.

n the ground floor is a large room dedi-
d to the late Rev. W. G. S. Whicker, a
ner rector of the parish. This will be
d as a spare classroom, for medical in-
ctions, and for other purposes. On the
e floor there are also a private room for
headmaster, bicycle and cloakrooms
boys and girls, and lobbies in connec-
with the staircase and lift.

dditional cloakroom accommodation is
vided on the mezzanine floor, which
nds over the ground floor, with the
eption of that portion occupied by the
er part of the Whicker room. Over
latter and the mezzanine floor is the
ch Memorial Hall, 53 ft. long by 40 ft.
e. to be used for assembling the chil-
, for prize distributions, and other
tings.

ehind the front portion of the building
a large covered playground for boys,
space being under two storeys of class-
ms; and as the beams supporting
latter extend from side to side of the building without intermediate support, the playground is free from obstructive columns.

The first floor behind the Memorial Hall contains five classrooms, each with accommodation for forty scholars, reached by fireproof staircases from the front entrance and communicating by means of a continuous balcony and similar staircase with the old school.

In the second floor are a teachers' room, cloak and other rooms, a covered playground for girls, and five classrooms corresponding in dimensions and arrangement with those on the floor below.

The windows of the ten classrooms, protected by the balconies, have opening casements fixed on top and bottom centre pivots, so that the effect of open-air classrooms can be obtained.

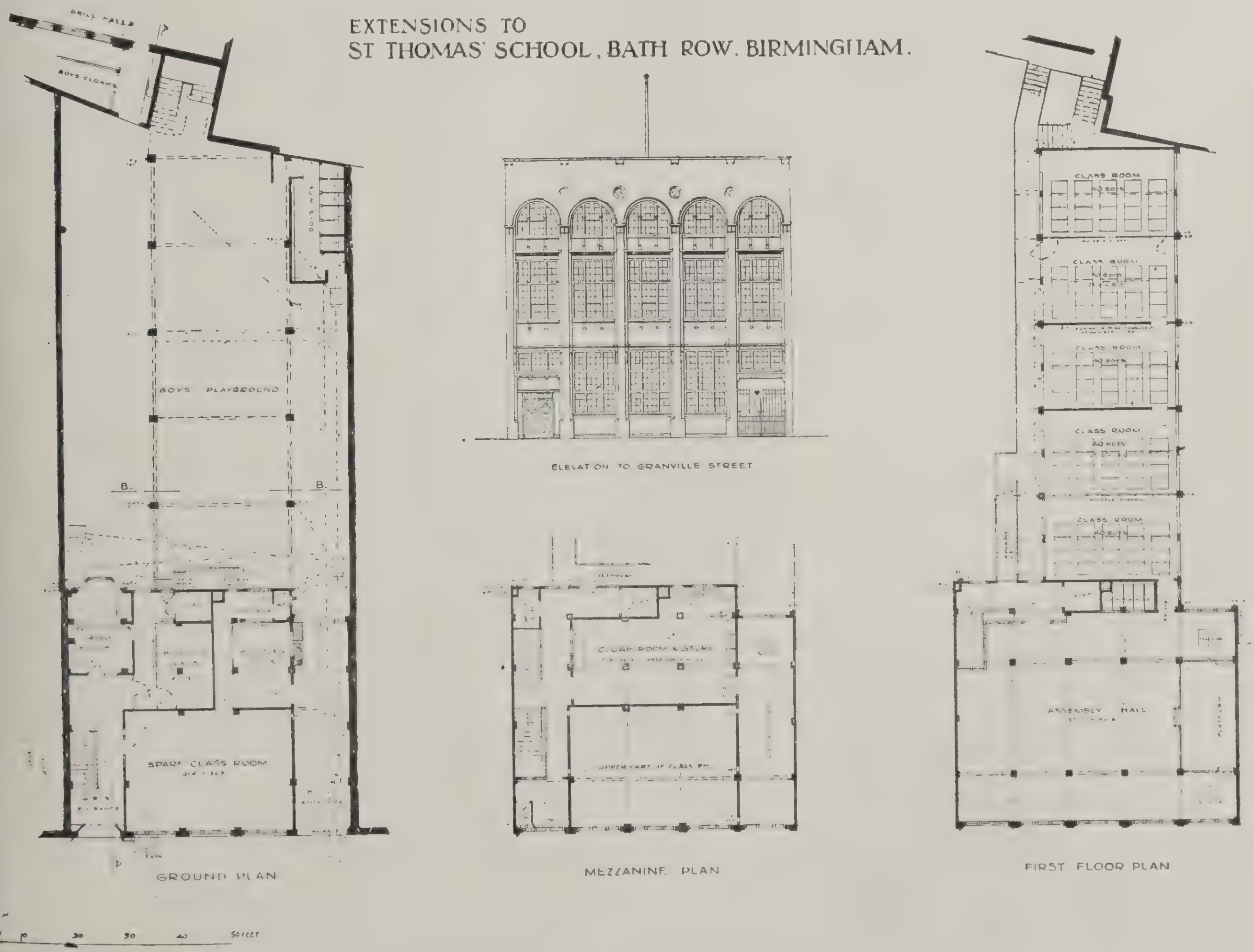
The roof over the classrooms constitutes the second playground for girls, and is provided with access stairways at each end and protected by parapet walls 7 ft. high.

Measuring 144 ft. long by 54 ft. wide by 53 ft. high, the new building may be thus briefly described from the structural standpoint: The skeleton consists of wall and interior columns, by which all loads are received and transmitted to the ground; wall lintels and systems of floor and roof beams, the former supporting the exterior curtain walls and the latter taking the floor and roof loads; the skeleton being incorporated with the curtain walls and the floor and roof panels, so that the whole forms a monolithic structure of enormous strength despite the slenderness of the various structural elements. The necessary interior partitions forming the rooms, hall, stores, stair enclosures, lift well, and other accommodation, are also monolithic with the skeleton, and the same remark applies to the staircases.

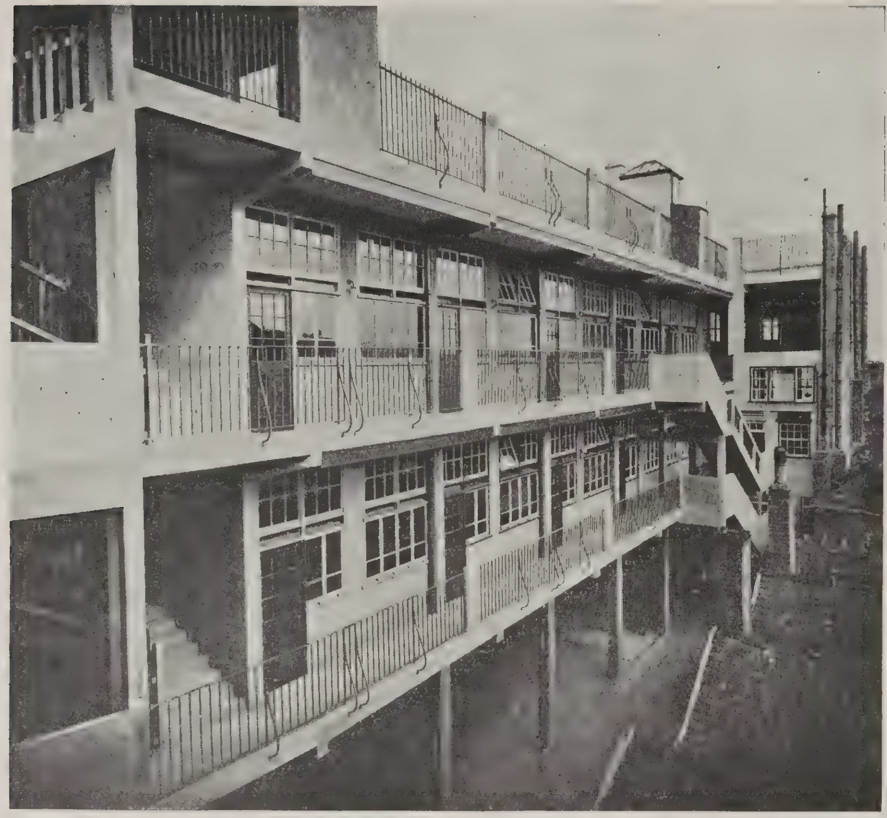
The columns are provided with extended bases for suitable distribution of the loading, and their cross sections at ground level range from 11 in. to 14 in. square, according to the load to be carried, the transverse dimensions being reduced appropriately at successive storeys. The beam spans are arranged with a special view to simplicity and economy of construction, a point sufficiently demonstrated by the fact that a thickness of 3 in. was found sufficient for the floor panels to enable them to carry with an ample factor of safety superimposed loading up to 112 lb. per sq. ft. At the same time, the spans of the beams are of length sufficient to carry the floor above the Memorial Hall without any interior supports, and to leave the covered playground beneath the classrooms quite free from obstruction.

One conspicuous benefit derived from the adoption of a reinforced concrete building is represented by the space gained by reason of the slenderness of the enclosing walls, which are required to act merely as weather screens, since all loads are carried by the general framework. Hence at St. Thomas's Schools the exterior walls are only 6 in. thick, as compared with the massive brickwork, from 14 in. to 24 in. thick, that would have been required for self-supporting walls of ordinary construction.

The building has been equipped and appointed on the most modern principles in all other respects. The Cambridge system



PLANS AND ELEVATIONS. HARRISON AND COX. ARCHITECTS.



EXTENSIONS TO ST. THOMAS'S SCHOOLS, BATH ROW, BIRMINGHAM: SIDE VIEW OF CLASS-ROOMS AND BALCONIES.
HARRISON AND COX, ARCHITECTS.

of heating and ventilation has been adopted, a method which is new to Birmingham and has proved entirely satisfactory. It provides for the admission of cold fresh air, regulated by means of inlet hoppers at a height of 8 ft. above floor level, the reason for this arrangement being that it is found to be more invigorating to breathe cold air than air that has previously been warmed. Draughts are avoided, and the low-pressure hot-water heating scheme is calculated so as to counterbalance the effect of the cold-air inlets. The heating apparatus is installed in the basement.

The total cost of the building and equipment was £11,500, and it was erected under the direction of the architects, Messrs. Harrison and Cox, of Colmore Row, Birmingham, by Mr. Thomas Johnson. Messrs. Henry Lea and Son acted as consulting engineers in connection with the design and installation of the heating and ventilating apparatus, the electric lighting systems, and the electric passenger lift.

REINFORCED-CONCRETE SHIPS.

Reinforced-concrete shipbuilding seems to have "caught on," and the first seagoing reinforced-concrete vessel so far built had its official trial trip on August 18 from the Moss Yard, Norway. It gave in every respect perfect satisfaction; the manœuvring left nothing to be desired, and the vibration from the machinery was not nearly so strong as in vessels built of steel or wood. In Denmark the first reinforced-concrete vessel and the first reinforced-concrete lighter have been launched. The former is 14 m. (46 ft.) long and rather more than 4 m. (13 ft.) in breadth. It is built throughout of reinforced concrete, the thickness being about 6 cm. (2.362 in.); the more exposed places are protected by an oak covering; it is to have a 10-h.p. engine. The lighter loads 100 tons, is covered in, and has two large hatches. The dimensions are: Length, 19.5 m. (64 ft.); greatest breadth, 2.75 m. (9 ft.); and height, 2.75 m. (9 ft.). The draught when empty is about 1 m. (3 ft. 3 in.). The first reinforced-concrete shipping company has been formed in Christiania with a capital of 800,000 kroner. The company will deal with North European cargo traffic, using reinforced-concrete motor vessels, two of which are in course of construction at the Moss Yard, and are contracted for delivery this year.

On this subject a writer in the Liverpool "Journal of Commerce," referring to the difficulty of obtaining steel, wood, iron, and timber to carry on all the necessary operations required for public and private works, observes that this shortage has to be applied very particularly to the construction of the coasting vessels, barges, and other craft, and where these have been constructed the cost has been almost prohibitive.

It therefore remains that if vessels are to be constructed at the present time new material should be employed, and it is proposed to adopt reinforced concrete for this work. Steel and wood are found to deteriorate immediately from the day that they are built unless very carefully protected by means of paint or other materials, but with regard to concrete, it takes about fifteen years for this material to attain its maximum strength and hardness, and this increase also decreases the stresses of the steel. Concrete is an absolute preservative of steel, more especially when it is surrounded with water and not subjected to the influence of air. In constructing a vessel of reinforced conc
the weight of the hull must
necessity be very much heavier than w
steel, iron, or wood is employed—the a
weight of the hull will be increased
33 1-3 to 50 per cent. in excess.

The whole external surface of the
crete can be made perfectly smooth, a
cases of sea-going vessels then the su
would be coated with the ordinary
fouling compositions, as is employe
wooden and steel vessels, but in rega
barges for river work this is not neces

It is found that where the ordinary
of a vessel are adhered to there is a
great expense in constructing the n
sary shuttering or form work, so as t
all the correct curves both longitudin
diagonally, and transversely, and
owing to this difficulty, and also the c
ture of the rods, that Messrs. J
Pollock, Sons, and Co., Ltd., of Lon
have decided to adopt another metho
constructing so as to get over
disadvantage.

All curved work is dispensed with i
reinforced concrete work, the form
becomes of the simplest possible na
and the rods are practically stra
throughout, so that no great expens
incurred, neither in bending nor fixin
place. The sharp corners are rounded
the curves shown being of the wo
fenders; there are no other curves on
ship. The deck work and the inte
construction also become very sim
especially as regards the ballast ta
either at one end or both ends of
vessel.

At a first glance shipowners and n
architects will stand aghast at su
drastic alteration from the preconce
ideas of design, but when one consi
the speed of seven to eight knots whic
usual for coasting vessels of this size f
with sails and auxiliary power, or for
sels up to nine knots with full power
without sails, they will agree the strai
lined hull will cause very little if
greater resistance, always assuming
the co-efficient of fineness is the same,
that the lines are slightly fuller forw
than aft., *i.e.*, the centre of buoya
slightly forward of amidships.

If reinforced concrete vessels were b
to this design, especially for experime
vessels, it would considerably reduce
cost and add to the strength and efficie
The advantages of reinforced-conc
vessels are thus enumerated:

(a) They cannot corrode or rust; (b)
life may be several hundred years; (c)
fire-proof and vermin-proof: (d) are ea
repaired and at a very low cost; (e) do
require trained shipwrights, platers, a
smiths, riveters, etc. (owing to Admir
requirements, these are very scarce no
(f) No expense for upkeep, and depre
tion nil; (g) can be constructed in hal
one-third the time of steel or woo
vessels; (h) cost very much less than s
or wooden vessels, especially if standa
ised and a number are constructed fr
the same shuttering.

OBITUARY.

Mr. F. Moore.

The death has taken place at Rugby
Mr. F. Moore, builder, at the age
seventy-one. He had acquired the b
ness in Lower Hillmorton Road, at
time in the occupation of Messrs. Hopk
which he continued to conduct, for a per
in connection with his youngest brot
and later with his own son.

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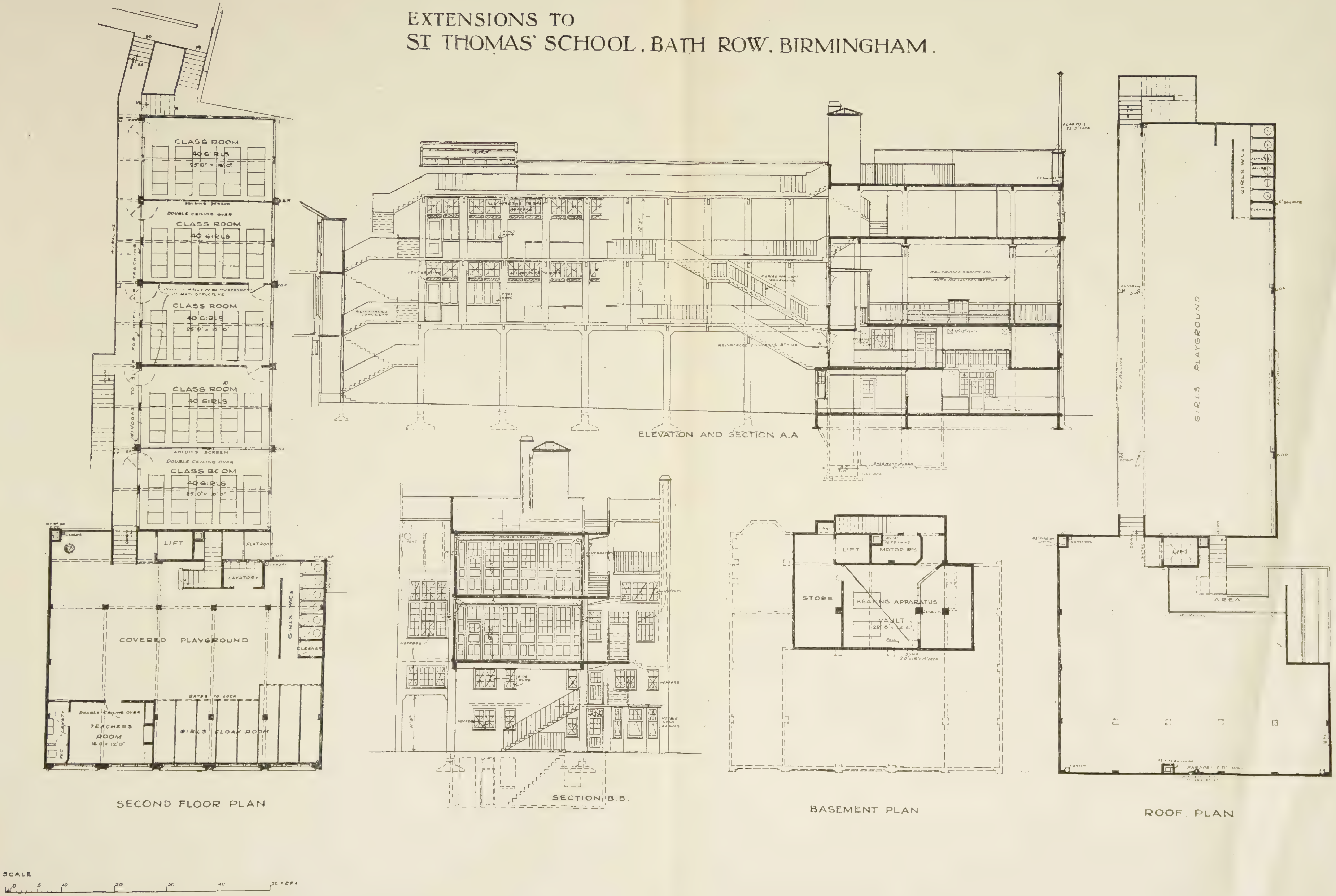
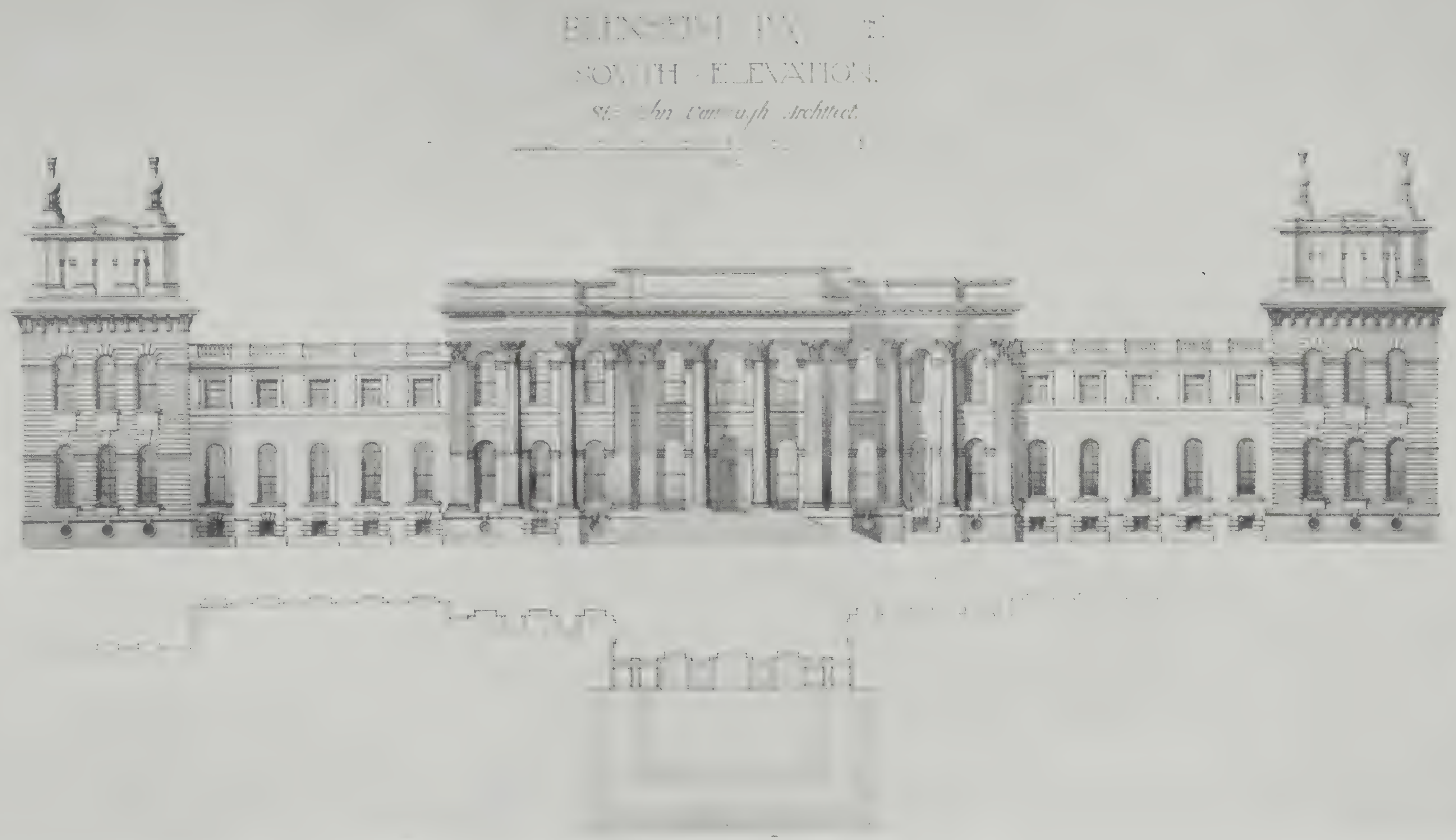
OF THE
UNIVERSITY OF ILLINOIS



ARCHITECTS' WORKING DRAWINGS (SERIES II.). XLIX.—EXTENSIONS TO ST. THOMAS'S SCHOOL, BATH ROW, BIRMINGHAM.

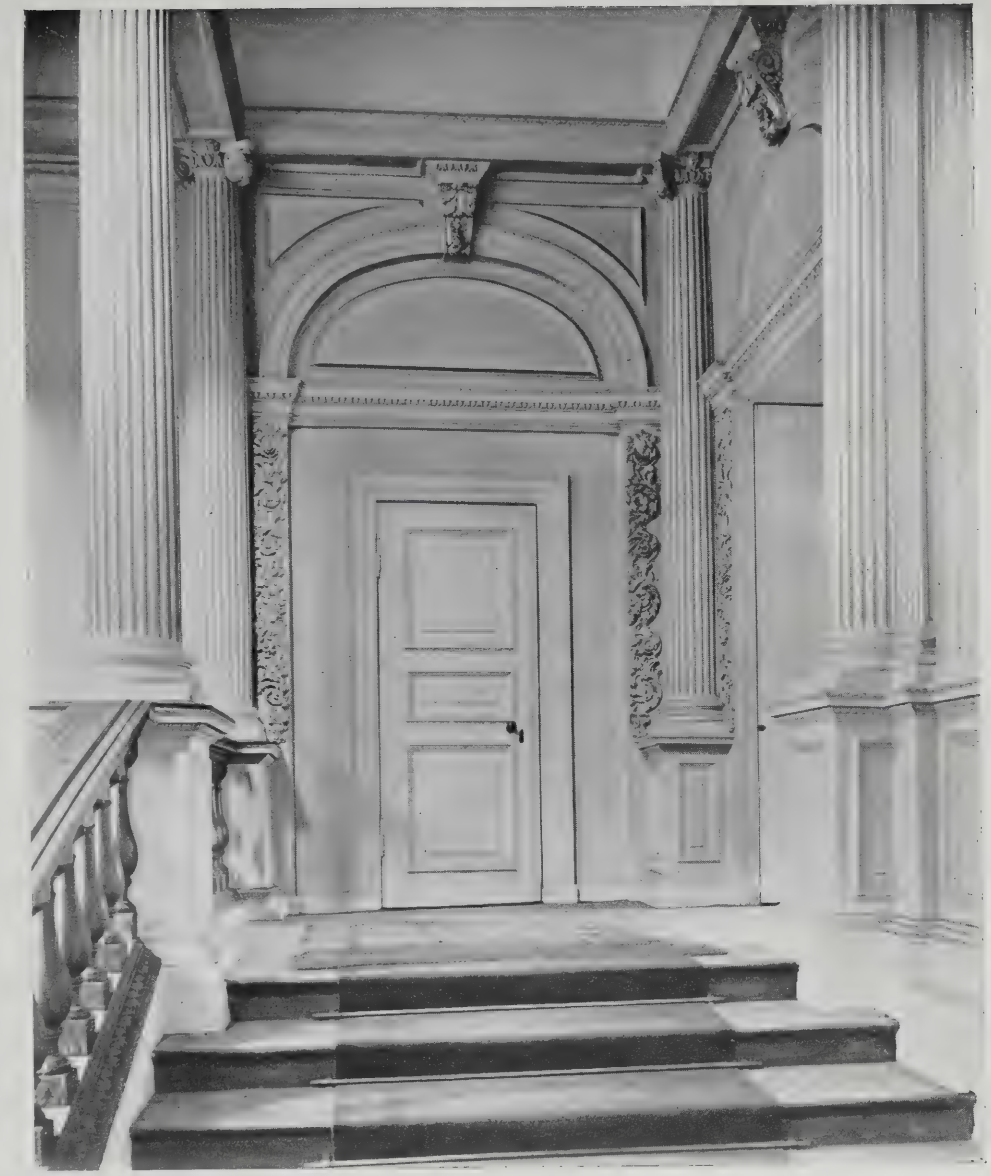
HARRISON AND COX, ARCHITECTS.



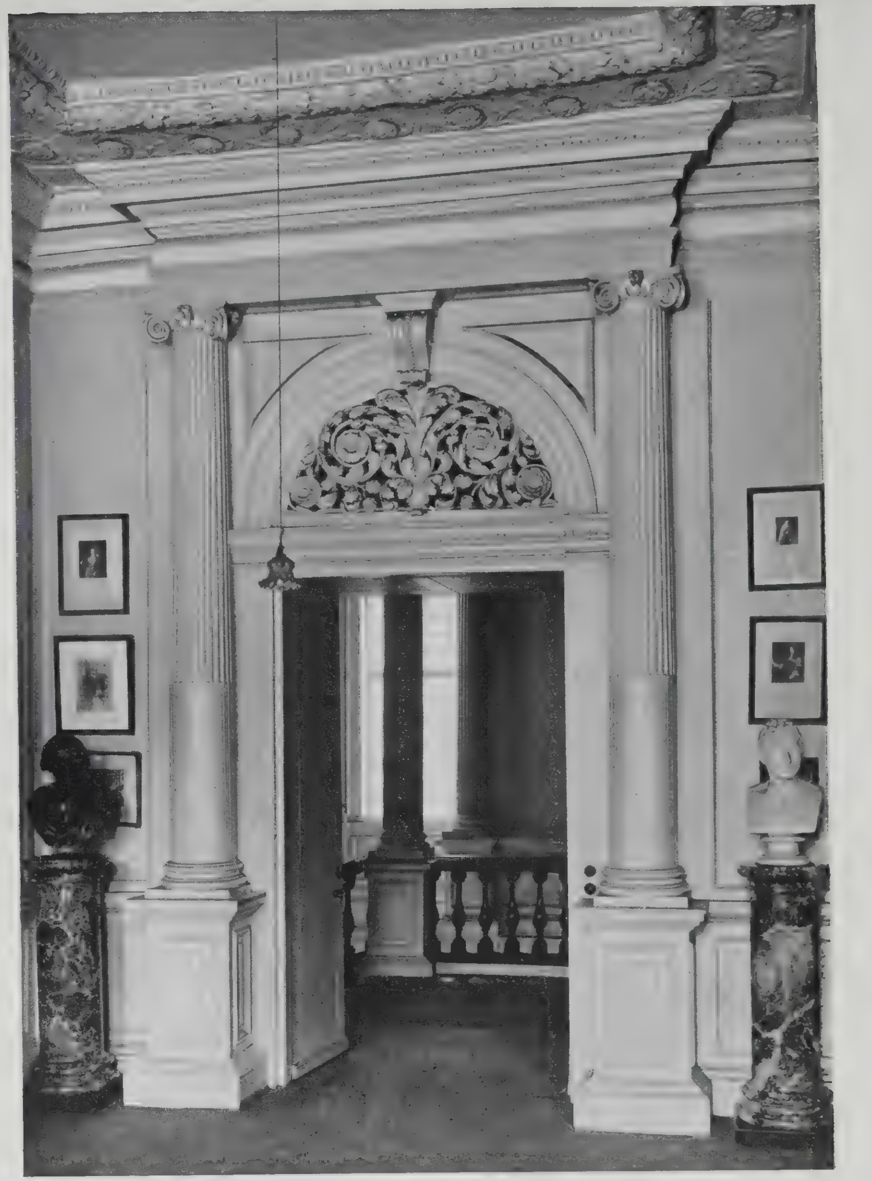
MONUMENTAL ARCHITECTURE (SERIES II.). XXV.—BLENHEIM PALACE, WOODSTOCK, OXFORDSHIRE: SOUTH ELEVATION.

MEASURED AND DRAWN BY H. C. MASON.

(From "The Liverpool Architectural Sketch Book.")

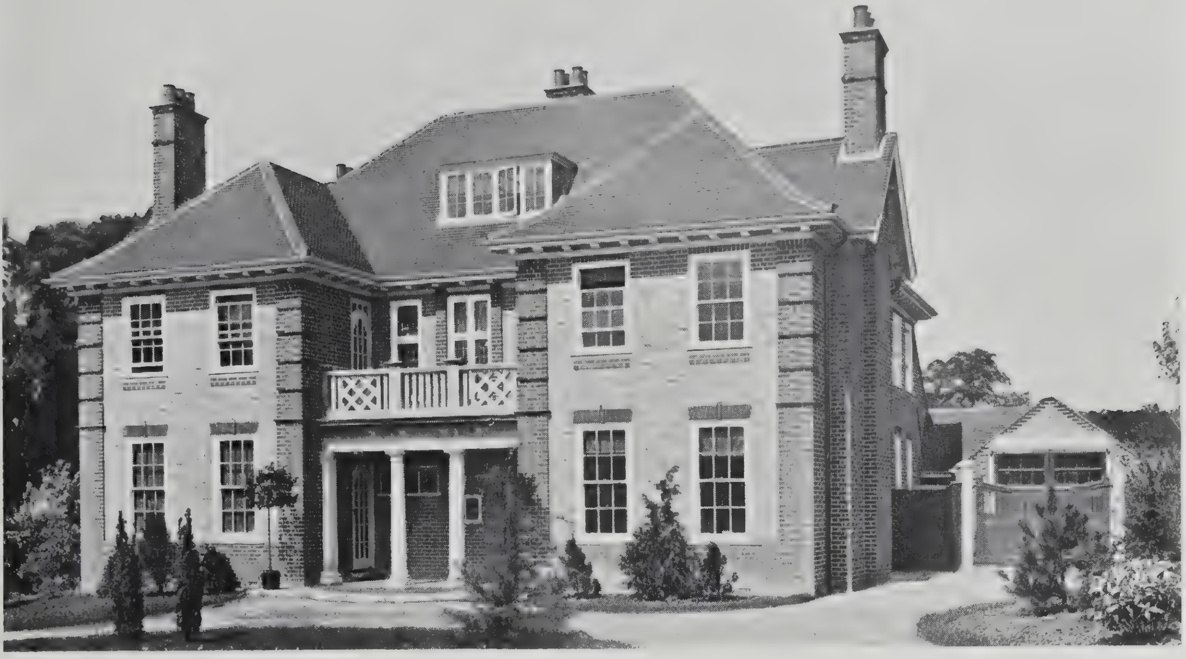


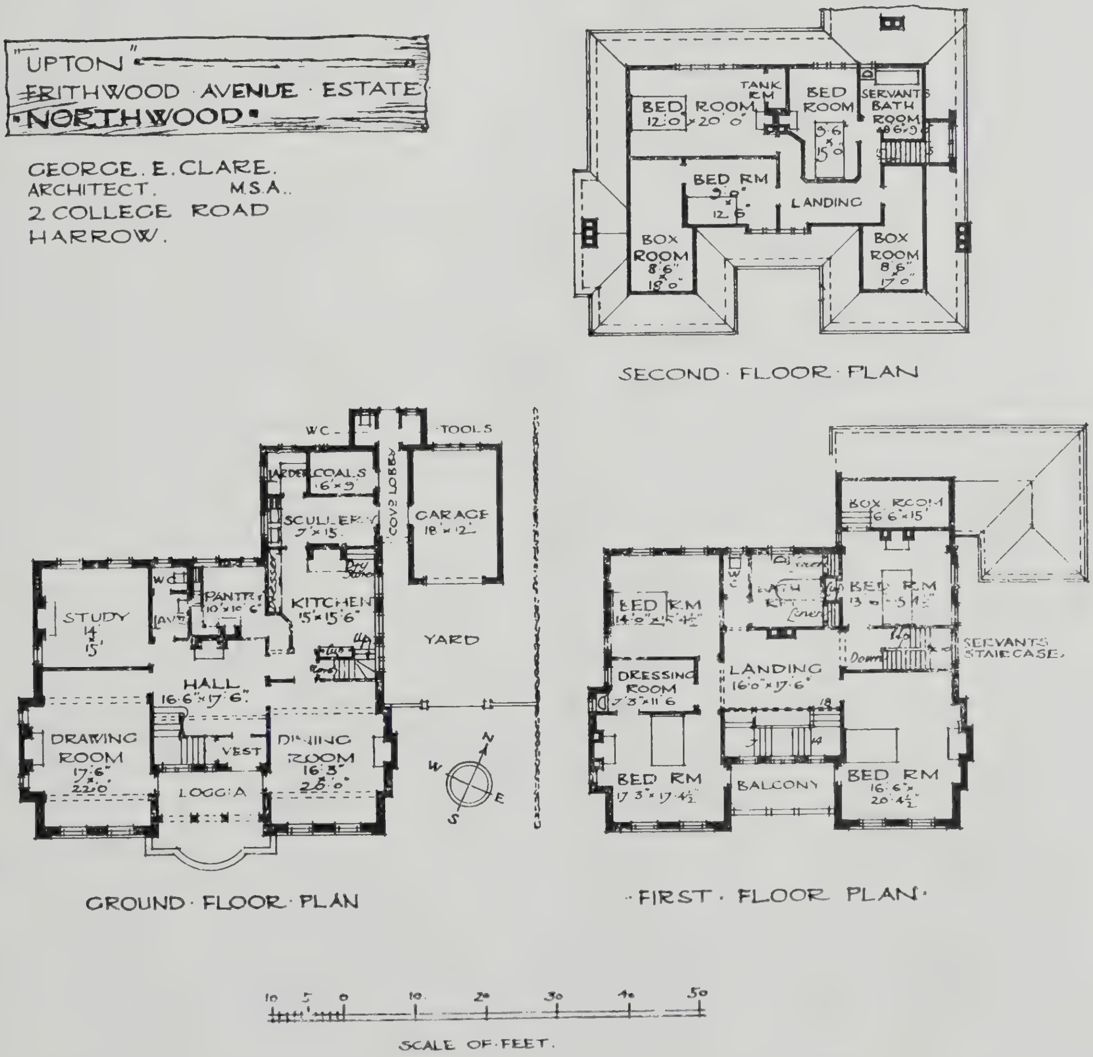
View of Staircase Landing showing Carved Enrichments to Door.



Doorway to Ante-room leading to Staircase Landing.

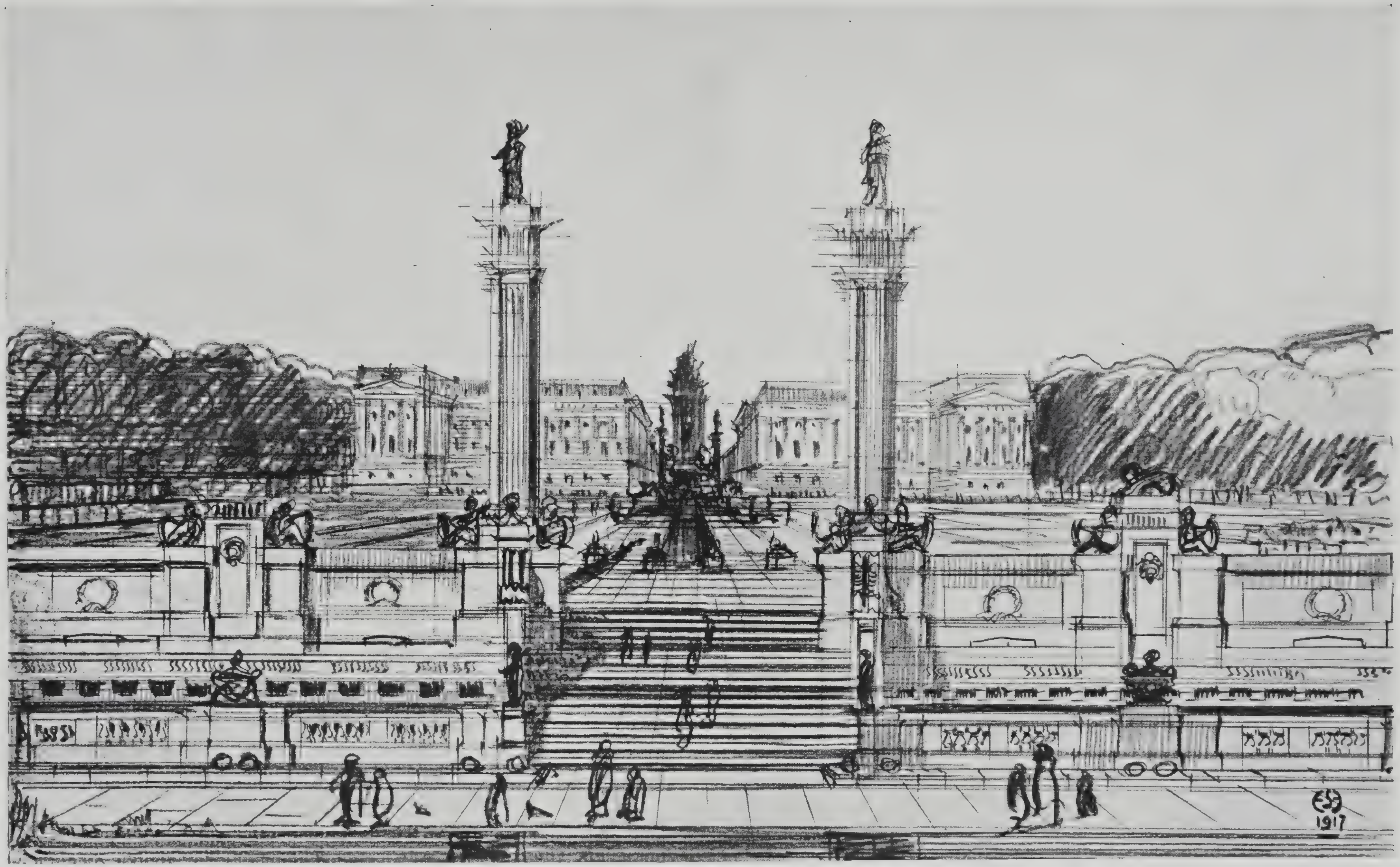
DETAILS OF CRAFTSMANSHIP (SERIES II.) XL.—DETAILS FROM ASHBURNHAM HOUSE, WESTMINSTER.





MODERN DOMESTIC ARCHITECTURE (SERIES III.). VIII.—"UPTON," FRITHWOOD AVENUE ESTATE, NORTHWOOD

GEORGE E. CLARE, M.S.A., ARCHITECT.



ARCHITECTURAL IDEAS.—IV. BY AN ARCHITECT ON WAR SERVICE.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

SEPTEMBER 26, 1917. *TOTHILL STREET, WESTMINSTER.* VOLUME 46. No. 1186.

NATIONAL PAPER ECONOMY.

wing to the very necessary Government restric- s on paper supplies, all elements of waste must igorously excluded. Our readers, we are sure, gladly assist in promoting this object, which is tem in national economy. They can co-operate us effectually in either of two ways—(1) By ing a direct subscription for this Journal, or (2) placing with a newsagent an order for its regular very. Casual purchases—now here, now there— te a serious discrepancy between supply and and, and cause a wastage of effort and materials could obviously be reduced to a minimum but the casual and erratic purchasing which we estly ask our readers to avoid.

O finish another man's work is rather a thankless task; but it is a fairly common occurrence with architects, especially when the work is extensive takes many years in the execution. St. Paul's hedral, thirty years a-building, and finished by the e three men—architect, master mason, and another chman—who began it, is a marvellous example to contrary. Too often the architect of a great build- does not live to see it completed; not because, as eone has hastily said, "great buildings kill their itects," but obviously because the architect must e lived long enough to achieve eminence before he ntrusted with the building of a cathedral, and may efore reach his natural term while the building is incomplete. It is one of the advantages of the n competition that, by often bringing forward men are quite young, it minimises this risk of posthu- s buildings, and it occasionally prevents the arrassments that arise when the original architect s without leaving any very clear indication of how vould finish the work. For usually a great building esigned by successive instalments; and architects er as much as writers in their methods of creation. ne conceive the whole thing in their minds before wing a line, and then seem to have arranged tally every line that is to be drawn, and almost ry detail of construction. They are apt to produce y the drawings required for immediate use, and nhappily, a man of this type is cut off in the midst is work, his intentions perish with him. Another much more common type of architect hastens produce rough sketches of the whole scheme, l is apt to modify them radically in making the king-drawings. In either case, the architect who es up the work that his predecessor did not live to plete is left without any very positive guidance, l in neither is he to be envied. In the former he to work pretty much in the dark; in the latter he st decipher and develop as sympathetically as he the sketchy hints that are apt to confuse rather n illuminate. In the rare case of complete designs ng left for his guidance, what he gains in ease he es in glory, for he is simply a supervisor of another n's work.

* * * *

n any case, it is a thankless task. It is probably t performed when the architect is able to throw off rageously the restraints of a servile attempt to y out literally the intentions—expressed or imagi- ively assumed—of his predecessor, and to complete the building in his own way. Being an artist, he will, of course, secure a fine congruity with the work already done, will work in the spirit of his predecessor, without tamely essaying literal interpretation. But he will be fully aware of the impossibility of investing himself with the other man's mind—of the futility, indeed, of subordinating his own ideas to those which are neither his nor another's, but only a shadowy go-between. These difficulties do not arise when the originator is a master like Inigo Jones and the interpreter is the creature of his own mind, like Webb, having but little individuality of his own, but being of ductile and derivative intelligence. This may be unjust to Webb's strength of character; but certainly Inigo and Webb seem to have been as Svengali and Trilby; although, alternatively, it may be possible to assume that they combined as perfectly as Beaumont and Fletcher, and that Jones, a natural tyrant, inordinately fond of imposing his will on everybody, made, as tyrants often do, a solitary exception, and lavished on Webb the indulgence denied to all others. Wren and James Gibbs were in different case; Wren being of placable though tenacious mind, and Gibbs a sturdy though reverent disciple, interpreting the spirit of the master, but being no slave to the letter that killeth.

* * * *

This question of finishing what others began has come forward in the case of Belfast Cathedral. A design was sketched by the late Sir Thomas Drew, and on his death Mr. W. H. Lynn took up the work. He suggested very considerable modifications of Sir Thomas Drew's sketchy and tentative design. Sir Thomas had proposed a square central tower. Mr. Lynn decided to make it octagonal, and proposed also many minor departures from Drew's suggestions. Mr. Lynn died without leaving any very definite record of his further intentions. Although building has begun, the architect who is to complete the work will have a fairly free hand. Mr. P. Macgregor Chalmers, who has accepted this task, has addressed himself to it with justifiable boldness. In the drawings he has submitted to the Cathedral Board, he shows a central octagonal tower, and four square towers on the west front. He proposes, also, a small chapel under the organ-loft in the south transept, and a larger chapel, to hold two or three hundred persons, in the north transept. Although he must naturally follow the lines of the existing work, his drawings show that what has been done or suggested by his predecessors has in no way infected him with the timidity that so often renders characterless the completion of a building by an architect other than the man who designed it. This is undoubtedly the right course to choose, if the work is to show individuality; and Mr. Chalmers is as fortunate in his opportunity as the Cathedral Board is in securing so accomplished an architect.

* * * *

A correspondent sends us a copy of a certain periodical (we would rather not name it), with this passage marked: "The only power to achieve desire is the human mind. It achieved the Five Orders of Gothic Architecture at the expense of science, art, civilisation, and human freedom." We are asked, "What does this mean?" and our correspondent suggests that our contributor "Diogenes" shall be asked to solve the riddle. We very gladly pass it on; and our contributor makes the following comments *more suo*: "This may be a fair question, but it has been sent to the wrong address. My own sins of omission and commission are a sufficient burden for me. Perhaps your correspondent is consulting me with the same object that once moved Douglas Jerrold (I think it was he), looking haggard and woe-begone, to ask an intimate friend to explain to him a particularly obscure passage in Browning. After wrestling with it for some considerable time, the consultant confessed that he could not make head or tail of it. As far as he could distil from it any meaning at all, that meaning amounted to unmitigated nonsense. This opinion being pronounced, Jerrold joyfully jumped to his feet, grasped his friend's hand, and exclaimed fervently, 'Thank you, friend! You can't think what immense relief you have given me. I read that passage a dozen times, and the more I read it the more it confounded me. At last I was afraid my brain had gone.' If it will relieve your correspondent to assure him that I am as much in the dark as he can possibly be about the gem of thought he sends me, I am happy to tender him that assurance. I have read the passage backwards and forwards, upside down, inside out, and boustrophedon-wise—that is, the first line from left to right, the next from right to left. I have tried skipping the alternate words, collocating initial letters, and all the expedients familiar to students of the Great Cryptogram. All in vain. I have failed miserably to extract from it the smallest particle of anything bearing the remotest resemblance to sense. Is it a message in cipher, or an escape from the agony column? I rather incline to the latter view; agony columns, being nebulously indicated by the reference to 'the Five Orders of Gothic Architecture' and their positively awful expense. I should like to add the diffident opinion that the achievements of the human mind are often greatly exaggerated."

* * * *

Too often we have been constrained to express disagreement with views on the housing question expressed in the "Spectator." In opposing them, we have always moderated our tone in recognition of the really benevolent zeal of the editor of our contemporary whom all must respect for the efforts he has made, at considerable expenditure of time and money, to arrive at a practical solution of the problem of building cottages so economically that low rents could be charged for them without imposing an unfair burden on the owner. Nevertheless, we have felt bound to protest that, in our view, this is not the right way to tackle the problem. We have always held that the only right course is to raise wages, not to strain after cheap cottages. To that view we adhere. That the editor of the "Spectator" is converted to it is perhaps not too much to hope for, considering that the war has set so many problems in an entirely different light, and has swept away so many inveterate prejudices and predilections. At any rate, we are delighted to see appended to a letter an editorial footnote that is quite in the right spirit.

* * * *

Not but that the editor of the ' Spectator" has been always of the right spirit, and that is why we are so hopeful of his conversion to the broader view. His correspondent had written: "There are millions of officers and men who have lived for years in Nisson huts, tents, shacks, and shelters, and those who have at any time possessed a share in a well-warmed Nisson hut during a cold French winter have found themselves sufficiently comfortable to declare that they are no longer willing to spend from one-tenth to one-fifth, or even one-fourth, of their income in rent of a cottage or small dwelling. At the close of the war there will be available a very large number of such huts, which will probably be disposed of to contractors at a few shillings apiece. Could they not be utilised, especially in country districts, and would they not be accepte men who have learned that such a hut is cheap good, and who have got rid of old-fashioned prejuc in favour of stone and lime or brick houses, which a great deal, and, when badly built, are poor enc shelters?" The editorial comment is: "As a porary shelter—yes. But, after all, house-pride is of the art of life, and that cannot be cultivated Nisson hut." We would add, not ungraciously, trust, No, nor in a pisé-de-terre or mud-hut. such rather desperate expedients seem to ass tacitly that while everything else is progressive conditions of rural labour are immutable. Until fundamental fallacy is finally uprooted, discussio the rural housing problem must be to a consider extent futile, because the most vital factor is ign It is impossible to bring down the mountai Mahomet, the house to the labourer. It is evident the labourer must be raised to the standard of housing. "House-pride" can be cultivated on other terms.

* * * *

Something very like a pantheon seems to be con plated as a war memorial for Glasgow. It is descri however, as a memorial church, "in honour, irres tive of creed or denomination, of all High regiments and Highlanders in the Navy who given their lives for their country in the war." sumably the church itself will be undenominati but to call it a pantheon might be thought to savo heathenism. That there still exists much sensitive in such matters may be inferred from the rather sli ing reference to "pagan temples" brought out by discussion of a proposed design in the Greek mod Manchester Art Gallery. It is stated that the int walls of the church will be apportioned to the va Highland regiments, the names of which, with colours, crest, and motto, will be emblazoned on walls. This, we may confidently anticipate, wil done extremely well, for the Scots excel in such w as witness the exquisite gems of this kind wrought incomparable skill by Mrs. Traquair for the kni stalls in the Thistle Chapel which Sir Robert Lor added to St. Giles's Cathedral in Edinburgh. Glasgow apparently belongs the honour of concei the first war memorial church *per se*, but of c many school chapels to commemorate war heroe being projected.

* * * *

The circular letter on housing which has been by the Local Government Board to the various authorities, requesting them to prepare a sc towards which, if approved, the Government w give substantial financial assistance, has evoked the Housing Committee of Poplar Borough Cou suggestion that the housing question should no dealt with piecemeal in London, by the bor councils, but as a whole, by the London Co Council as the housing authority for London. proposal is not at all likely to commend itself t other metropolitan councils, which are not, as a ru favour of this sort of federal administration. The not like being overridden by the County Counc matters that, like housing, seem to them to be of m local concern. Besides, the London County Cou adventures in housing have not been entirely happ at all events, they have been, in past times, subj —mainly for political reasons—to violent storm criticism such as ruin the oak, but leave the lily sc less. While the London County Council is rega as fair game for newspaper attack, the bor councils are too unimportant to attract this del attention—are, in fact, left too much to their devices. But an absolutely fatal objection to the posed centralisation is that it is impracticable, L.C.C. having already too much to do.

HERE AND THERE.

Manchester the question has arisen whether it
would be proper to erect a classical temple in a
smoky city. There are those who regard it as
fanation to put up a Greek building where it will
her grime and abide in perpetual gloom. For
es like Manchester, they tell us, some kind of
zed terra-cotta is your only ware—something on
ch you can turn the hose at frequent intervals.
s ingenious expedient assumes the soot of cities as
nething inevitable. Is it? I have a brighter vision
the future of cities. It came to me first, I think,
a minor manufacturing town of the Midlands. I
l set out for it expecting to find it the same sort of
erno of which I had seen too many examples in the
rth—the kind of place where huge chimneys con-
ntly send out columns of black smoke, and where
atmosphere is simply suffocating. My fore-
lings were entirely falsified. No reek assailed the
trils; no smoke-clouds obliterated the sky; there
s no taste of sulphur in the air, no grime on the
ldings; no cinders crunched beneath one's feet.
ere were avenues of quite healthy-looking trees,
l the forecourts of the little houses were gay with
vers. And yet the prosperity of the town depended
n a certain branch of steel conversion. How was
s? No coal was used in the factories, and no steam
ver. All the engines were driven electrically or by
-engines, and all the furnaces were heated by the
ne means. Hence the little town was kept clean
l wholesome.

* * * *

This case is probably exceptional, but there seems
e no imperative reason why it should be. A little
he ingenuity that has discovered so many ways of
ducing smoke would suffice to secure its preven-
n. It has been said by cynics that the sight of a
ty city fills the "greedy manufacturer" with
ng satisfaction. He regards it as an evidence of
sperity. In reality there are quite sordid reasons
y it should make him sad. It represents so much
ste, for it implies that he has got less out of his
l than would be possible if his processes of com-
tion were more thorough. For my part, I have
icient faith in science to feel confident that it can
vent the poisoning of the air and the disfigure-
nt of buildings, and I can easily imagine that
ct descriptions of the manufacturing districts of
day will be read in the school lesson-books of
norrow with the incredulity that daunts the young
o are faced with facts that are foreign to their own
sonal experience. They will like these accounts,
hey like all romantic and terrible improbabilities,
they will not believe in them. They will think it
possible that their white cities can ever have been
black as the historian will paint them. No
ponsible Government would have permitted it, no
e people would have endured it.

* * * *

And yet thus it is. There are in this fair island of
s towns in which it is a penalty to exist—factory-
den towns, where forests of tall chimneys com-
e with each other in puffing out poisonous fumes
t stunt the growth of the inhabitants and make
etation sickly for miles round. It should not be
wable thus to devastate the country and pollute
town on any pretext whatsoever. Yet when town-
nners and social reformers protest, they are told
t they are idle dreamers, cranky faddists, rank
ialists, who would "ruin the country"—as if it
e not ruined enough by these "level-headed men
business," to whom squalor and untidiness seem
ntial to prosperity. These men of business, how-
r, are of the old school—or, rather, they are of no
school at all. Their sons who have been to Oxford see things at longer range and in truer perspective, and are putting into practice the precepts of the town-planners. Towns are for commerce, not for manufactures. Factories sprang up in them for the very reason why they should now be kept out—because towns are centres of population. It was once necessary to build the works within easy distance of the workers; but there are now swift means of transit for labour and the products of labour, and towns should be restored to something like their original character of pleasant places to look upon and to live in—those of them, that is, that were not actually created by the sudden growth of manufacturing industries.

* * * *

Even those "purely manufacturing towns" are not past praying for. They may long remain hideous to the eye; but they need not continue to send up the death-rate. Drastic laws should isolate them from dwelling-places. Until such time as they can be rendered wholly innocuous, it should be penal to put up a dwelling within the danger-zone of their blighting influence, and they should be kept well to windward of residential districts. And what of the workers in them? Is their lot irremediable? Not at all. For one thing, it is generally more healthy inside a factory than in its immediate vicinity, for the same reason that it is healthier to be immediately behind a gun than some distance in front of it; for the factory throws off its nastiness diffusively into the outer air. Otherwise the workers would never come out alive. And when the factory is constructed upon modern principles, as so admirably described, illustrated, and advocated in Mr. Kahn's new book; when it leaves nothing to be desired in cleanliness and sanitation, lighting and ventilation, order and convenience, and is the abode of comfort and content—and you need not travel to Utopia, nor even to Port Sunlight or Bournville, to see these ideals materialised—in one way and another the workers are very well, thank you. But even supposing the factory to be incurably noxious, that is surely an excellent reason why the worker and his family should live as far away from it as transit facilities will allow; and it is a point upon which town-planners do well to insist.

* * * *

Thomas Gradgrind, B.A.Oxon., has not necessarily inherited his father's proclivities along with the factories. A son, it is too frequently forgotten, is endowed, through his mother, with a fresh set of ancestors; and he has studied the humanities with bland effect. With a more humane spirit among employers and employees we shall get very different labour conditions, and vastly different factories from those which have survived from the primitive days of the Early Victorians. We must build in the new spirit, and with due regard to what it is perhaps better to call the psychology rather than the sentiment of the movement. This implies that the modern industrial building shall be not merely negatively inoffensive, but that it shall be positively pleasant, inside and out, and that it shall nevertheless be situated well away from populated centres. As for the very few industries that are absolutely and irremediably noxious (if such there be), I would send them to the Sahara. On the general question of factory building, it may be feared that when the great rush comes—and it will come very suddenly, and perhaps much sooner than is generally expected—there will be much hasty and ill-considered building. But those who build in haste will repent at leisure

DIOGENES.

ANNUAL EXHIBITION OF THE LIVERPOOL SCHOOL.

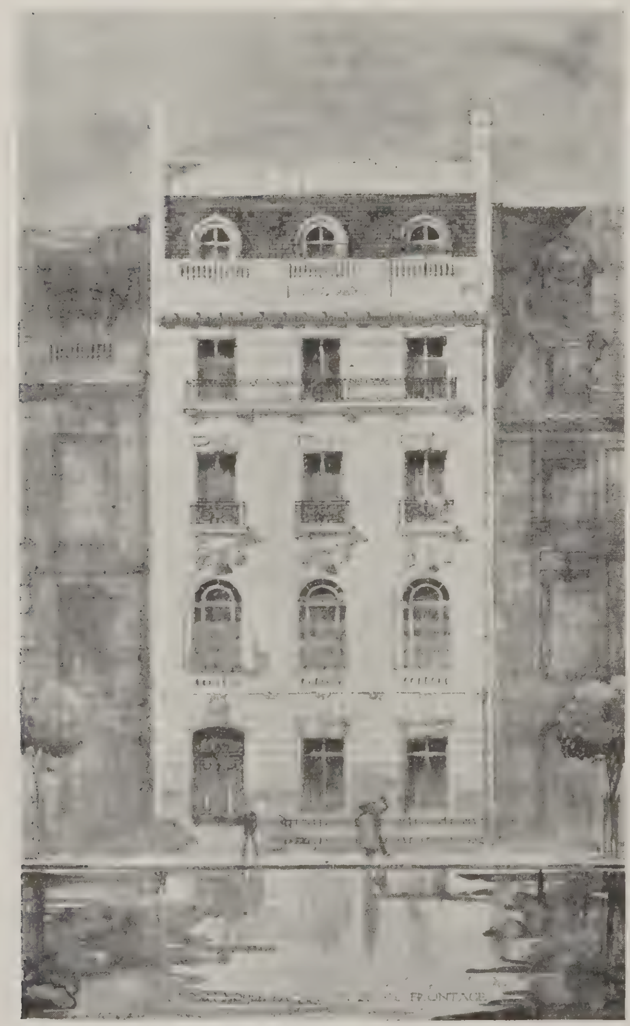
FOR over two years no students have been admitted to the School of Architecture of the University of Liverpool unless ineligible for the Services or of Allied or neutral origin. Nevertheless, the past season has shown an increase over the previous one in regard to the number of students taking courses. As might be expected, the work exhibited is mixed in character. Many of the designs afford evidence of the nationality of their authorship—Spanish, American, or English, etc., as the case may be; and there is considerable variety in rendering. But, on the whole, the general tendency of the school would seem to be toward the Italianate manner of McKim.

The work of the first-year students is in some respects particularly promising. An American, Mr. Barman, shows two drawings of especial merit—one for a private library, the other for a cinematograph theatre. The former resembles in plan a work of Ernest Flagg's; the latter is interesting as an exercise in First Empire motives. Messrs. Marshall, Rushworth, Condé, Kelly, Bustillo, Dauber, and Allen are also represented by a number of sound designs for garden pavilions, monumental entrances, war memorials, and domestic subjects. The most prolific display of measured work for the diploma course is made by Mr. Gordon Hemm, who submits many examples of Manchester warehouses of the Florentine type. These buildings, if a little provincial and jejune in detail, are bold conceptions in the mass and worth recording as such.

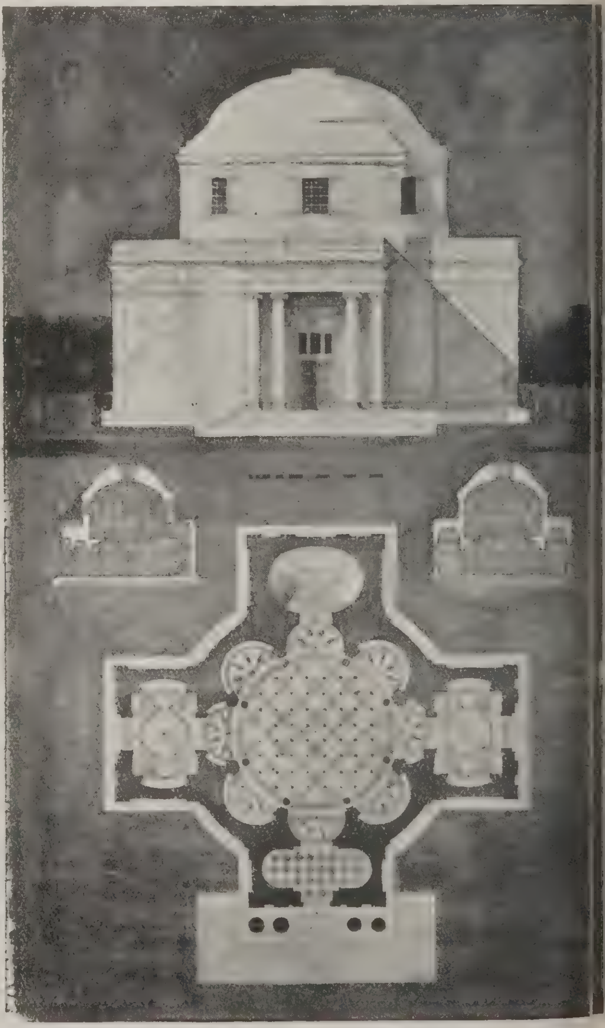
Mr. A. C. Holliday and Mr. T. Medina—both of whom have received First Class Certificates— clearly the best students of their year. In design measured work, Mr. Holliday's output is the larger, this fact no doubt materially assisted in gaining for the Holt Travelling Scholarship (£50). His meas work includes some of Cockerell's most effective bu ings in the South of England. Quite the best of Holliday's designs is that for a civic centre for Wi Lancashire—the subject selected for the Lever F Competition. Mr. Medina having produced a solu of equal merit, the first and second prizes (of £15 £10 respectively) have on this occasion been ama mated and divided equally. If the quantity of Medina's work is less, it is all most carefully stu and drawn with admirable precision. To Mr. Med in fact, belongs the credit of producing the fi student's drawing of the exhibition—"A Study fo Exposition Façade."

A Siamese student, Mr. Saroj Subhung, to who second-class certificate has been awarded, is the au of a very ably rendered composition, of which the g doorway of the Roman Pantheon is the theme. subject is well arranged, accurately drawn, and tre with delicate ink washes in a highly successful man

However, as might be expected, all students' formances in draughtsmanship and colouring eclipsed by the accomplished exhibits of Mr. Jenkins, who is responsible for the instruction give the school in drawing and rendering. Mr. Jenks' methods appear to be a fusion of those practise certain French and American schools. Out of ther



DESIGN FOR A TOWN HOUSE FAÇADE. BY F. JENKINS.



DESIGN FOR A PRIVATE LIBRARY. BY C. A. BARM developed a convention of the greatest interest and ie.

An important innovation in the usual arrangement of exhibition has this year been effected by devoting ection to the work of the associated Department of ic Design. A variety of town-planning projects gest the lines along which suburban and park elopment should proceed in the case of Wigan and er towns. A fully elaborated plan for a new bridge oss the Thames is one of the most attractive emes. Altogether the Liverpool Schools of Archi- ture and Civic Design are maintaining their reputa- n for progress and vitality.

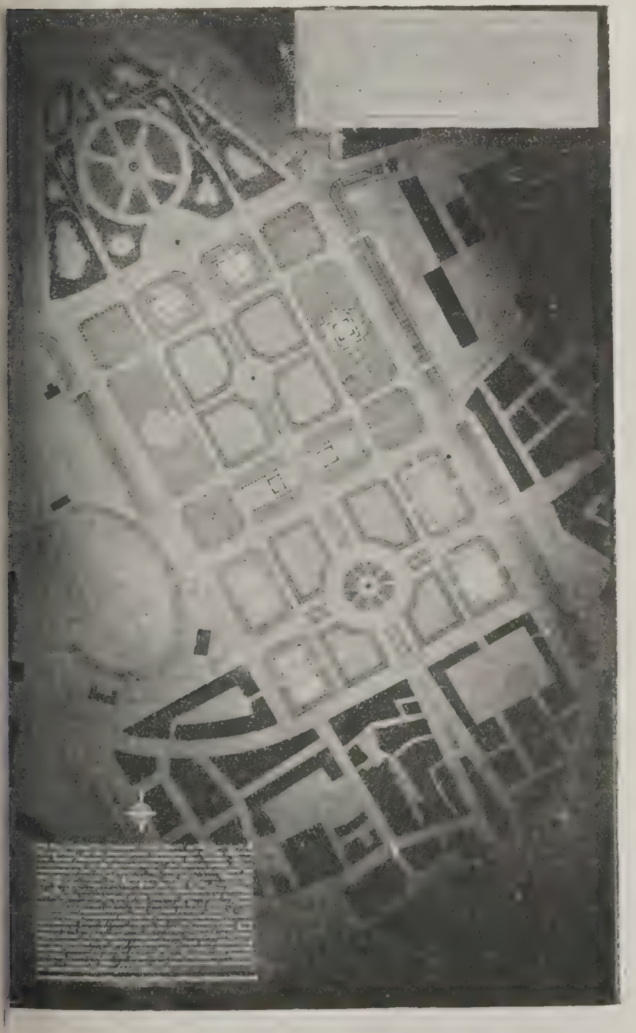
THE PLATES.

Drawings by Students of the Liverpool School.

THESE drawings, executed by students of the Liverpool School of Architecture during the past session, are on view at the annual exhibition of school's work at Liverpool. An article on the ibition appears above. It is satisfactory to e that, in spite of the war, there has been an increase er the preceding session in the number of students ing courses, and that a high level of excellence, both design and draughtsmanship, has been maintained.

Detail of the North Elevation of Blenheim Palace.

From the architectural point of view, the rendered awing method of representing a building is perhaps e most effective of all. It has the realistic virtues of otography and none of its perspective disadvan- ges. Rendered drawings, however, have a habit of varying considerably. A common defect is over-emphasis of the shadows, the drawing having a patchy and unbalanced appearance, and much of the detail work being unduly obscured. This fault has been skilfully avoided by Mr. H. C. Mason in his drawing, published in this issue, of a detail of the north elevation of Blenheim Palace. This is an admirable piece of architectural draughtsmanship, showing Vanbrugh's work, both in mass and detail, to much advantage.


DESIGN FOR A CIVIC CENTRE FOR WIGAN, LANCS.
BY A. C. HOLLIDAY.

Architectural Ideas in War-Time.

This is another imaginative composition by an architect on war service. Unlike the preceding examples in this series of plates, the present drawing is in pen-and-ink, a medium in which the artist works with a facility quite equal to that displayed in his pencil drawings. A further example will appear next week.

Carved Panels in the Library of Queen's College, Oxford.

Some of the most interesting woodwork in Oxford is to be found in Trinity Chapel and in the library of Queen's College. The panels illustrated on the double-page plate in this issue are from the latter building. Almost Baroque in its exuberance, this style of work never completely gained the affections of our somewhat phlegmatic race. That it is very beautiful cannot be denied. The carver of these pierced panels has invested them with a sedate dignity and a sort of rich stiffness that are remarkably captivating.

"THE ARCHITECTURAL REVIEW."

THE September number of "The Architectural Review" is one of varied interest. The principal feature is the concluding part of Mr. Arthur Stratton's account of the Royal Exchange, London. In this article he deals with the second and third buildings, by Jarman and Tite respectively. The text is profusely illustrated by rare old engravings and by plans and photographs. The fine design which Cockerell submitted in the competition for the new building after the fire of 1838 is also shown. Having referred to the Bourses of Petrograd and Paris, Mr. Stratton says: "If London's Exchange is hardly comparable with these two continental examples of outstanding merit, it certainly holds its own, from the point of view of design, with those in most capital cities, while for historical associations it is second to none in the world." The gratitude of all lovers of London is due to Mr. Stratton for his scholarly and illuminating survey of the three remarkable buildings which, over a period of three centuries and a half, have been so intimately associated with the commercial life of the City. A feature of topical interest is "A Medal to Commemorate the Battle of Jutland," illustrated by some vigorous designs submitted in the recent competition of the Royal Numismatic Society by Messrs. H. Tyson Smith and E. Carter Preston. Another feature which nowadays has a very real interest, alas! for only too many people, is a beautiful war memorial tablet recently erected in the Parish Church of Arrochar, Loch Lomond, Scotland. Mr. Lionel B. Budden, M.A., A.R.I.B.A., is the architect, and Mr. H. Tyson Smith the sculptor. The completion of the new Government buildings at Westminster is illustrated by a series of very fine photographs. As the writer of the accompanying article reminds us, it was so long ago as 1898 that the late John M. Brydon was appointed by the Government to design and carry out a great new block of public buildings in Westminster. Three years later, in 1901, he died, leaving his work barely risen above the level of the ground. Since then Sir Henry Tanner, principal architect to H.M. Office of Works, has been in charge, and under his able direction the work has now been brought to a successful completion.

WAR·BVILDINGS·SECTION

THE PLANNING AND CONSTRUCTION OF MILITARY HOSPITALS.

THE term "War Hospital" covers a multitude of varying types of building with varying destinations, from the hole in the ground in the front-line trench to the great physical re-education centres in the rear, and includes canal boat, railroad train hospitals, hospitals for contagious diseases, rest camps, etc.

The hospitals, however, to which I refer (writes Mr. Charles Butler in the "Architectural Forum" of New York) are those for the general care of wounded and sick, and it may, perhaps, be easiest to classify them by their geographical relation to the front. I speak, I may say, entirely of the French front, as my experience at the British front is extremely limited.

I should perhaps preface my remarks with an explanation of just what my relation to the French Army was, and how I happened to have the opportunity to gain some knowledge of French war hospitals.

As a member of the American Relief Clearing House, I was at work in Paris in the fall of 1915 when Dr. Carrel, who knew of my having made a special study of hospital planning in America, asked me to prepare for him the plans for a small 100-bed unit, to be erected closer to the front than his hospital at Compiègne, then under shell fire and likely to be evacuated any day.

Administration difficulties in regard to the admission of foreign nurses to the advanced zone of the army prevented the erection of this hospital, and the destruction of the 380 mm. gun which was shelling Compiègne ended the necessity of evacuating, so the project was dropped; but the Deputy Minister of War in charge of the Medical Service (there are three assistant Ministers of War in France—for Munitions, Supplies, and Medical Service) expressed his interest in the plans and asked me to bring them to him. It turned out that it had been planned to hold a competition for a model portable house type of hospital to be erected near Paris and to serve as a type for future base and home hospitals; but after looking over our plans the Minister remarked that a competition did not seem necessary, and I volunteered my services to work out this model plan. A very excellent site was selected just outside the Bois de Vincennes, the great park to the east of Paris corresponding to the Bois de Boulogne on the west. At my request M. Pellechet, a former fellow-student at the Ecole des Beaux-Arts, was to his considerable annoyance dug out of his second-line trench and brought back to help me on the work. Dr. Dumont, a prominent young civilian surgeon, similarly mobilised for the war, was shortly after added to our combination, and we three working together have since very considerably influenced the design of French war hospitals.

All France is divided into two parts, the army zone—and the rest. The zone is a strip, on the average, thirty miles wide, parallel to the front, into which one only penetrates by the permission of the Grand Quartier Général. In this zone lie the front-line hospitals, ambulances, dressing stations, etc.

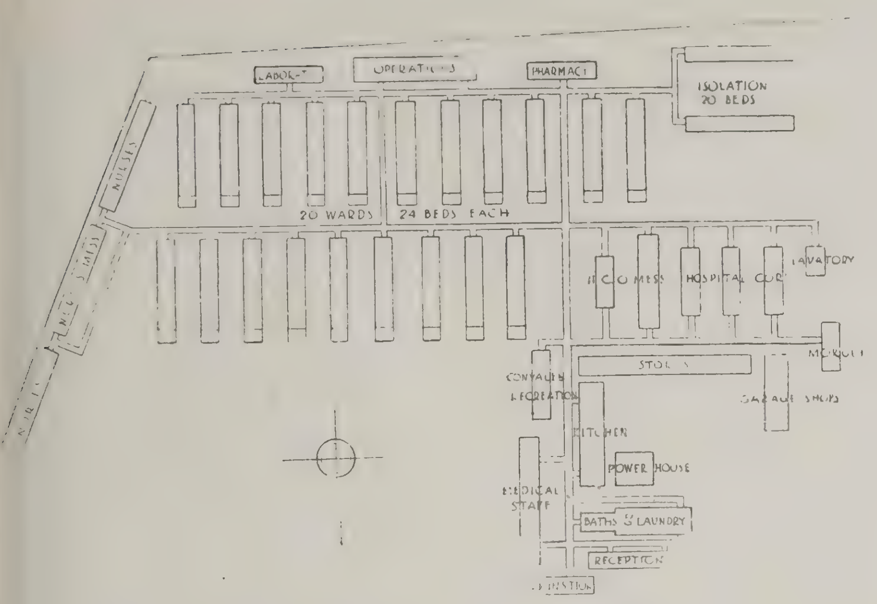
The grouping of these services is about as follows: In the front-line trench is what is known as the *abri du blessé*, a hole in the side of the trench, where the wounded man is put to get him as much as possible out of danger till he can be moved to the advanced dressing stations which lie fifty yards or so behind the front-line trenches. This dressing station, or *poste de secours*, is presided over by an assistant surgeon, probably a medical student when war began. From the dressing station, which is always underground and contains perhaps a dozen bunks, the wounded man is transported, as soon as the firing slackens sufficiently, through the *boyau*, or communication trench (*boyau* means bowel, and the convolutions of the communication trench for the purpose of localising the effect of bursting shells fully justify the name), back to battalion dressing station, perhaps a away.

You can imagine just how painful is trip through this mile of winding tren. Various types of stretchers are used, p haps the most satisfactory being hammock stretcher hung from a carried on the shoulders of the bea and more easily manœuvred in winding trench than the ordinary side- stretcher. There are also chair stretc for seated cases, etc.; but any way take it it is a hard trip for a woun man. At the battalion dressing stat is a full-fledged surgeon and there facilities for operating—as always, un ground. The dressing station is ge rally accessible for motor ambulances, at least at night.

The advanced dressing station is located so that one end is in direct co- munication with the *boyau* thro which the wounded are transported. I underground and fairly heavily protec and contains beds in two tiers, wit small space at one end for emerge dressings and stores. The woun reach this post in about six minutes from there are carried in ordin stretchers about a mile to the end of military road, the farthest point to wh ambulances can go.

These subterranean posts are m about 10 ft. wide at the ceiling, with w of planks sloping slightly in towards floor. Log posts support the roof and spaced about every five feet.

The lower beds are for the more se ously wounded, the upper ones slightly wounded. The former are movable for cleaning; the latter hing at one end to allow swinging for cleani The construction of the roof is interesti in showing the provision made for explo- ing shells. An explosion chamber built immediately above the ceiling o one layer of logs. Above the cham there are generally at least four layers



PLAN FOR 500-BED BASE HOSPITAL, VINCENNES, PARIS.

s, each layer placed crosswise of the ceding one, and large stones and earth ove these to a depth of at least 5 ft. r absolute protection against shells up and including 220 mm. experience has wn that 15 ft. should be provided. ainst 380 mm. and 420 mm. shells experience has as yet shown no satisfactory thod of ensuring protection.

The battalion dressing stations are ated underground and heavily proted from shell fire. They contain an erating room at one extremity, proed, as always, with two exits. Beds in tiers accommodate about twenty-four unded. Living quarters for orderlies, geons, etc., are provided above ground. e wounded arrive at these stations in out one hour from the front.

The next station, called an ambulance, located about two miles from the front, d comprises a number of buildings derground. The operating room is out 8 ft. by 17 ft., with an arched roof corrugated steel, the crown of which about 7 ft. 4 in. above the floor. The unches of the arch are filled with earth to the level of the crown, above which a thin layer of cement and a course of e trunks about 8 in. in diameter. Above se is the first explosion chamber, about in. high, again two or three courses of s, another explosion chamber, and ditional logs covered with earth and ks, making a total thickness from own of arch to the surface of about ft.

The explosion chambers are designed to unteract the effect of the type of high plosive shells which are fitted with a layed fuse that, ignited by impact, ows the shell to penetrate the earth fore exploding.

The operating room is reached by a *yau* leading from an examination room, so underground with heavy protection, d placed at the edge of the road by ich the ambulances arrive. From the erating room another *boyau* continues a waiting space, where, after having eir wounds dressed, those who are to go the hospitals can wait in security for e ambulances to carry them away.

This description might be extended to eater length, but will serve to give a ir idea of the dressing stations and amlances lying in the advanced zone, the st two or three miles back from the front, where shells may always be expected and danger is at all times present.

The French Medical Corps has devised a most ingenious unit for use in connection with these ambulances—what is known as the Ambulance Chirurgicale Automobile. This consists of a unit construction portable building, comprising a waiting-room about 10 ft. by 16 ft., a sterilising room about the same size, and an operating room about 20 ft. by 16 ft., all of which can be packed on two motor trucks. Another truck contains a very complete sterilising outfit, a fourth the X-ray equipment with electric generator, while the fifth serves for general supplies and transport of personnel. These buildings are now being erected with double walls and steam heat, and can be quickly transported to the point on the front where they are most needed.

We now come to the field hospitals lying a little farther back, and in which men can be cared for who need a few days' treatment before being sent on to the rear. They are a cross between the ambulances and the base hospitals, and are either in existing buildings, in tents, or in portable barrack buildings, but more and more in barracks and with more and more of the conveniences and comforts of the base hospital.

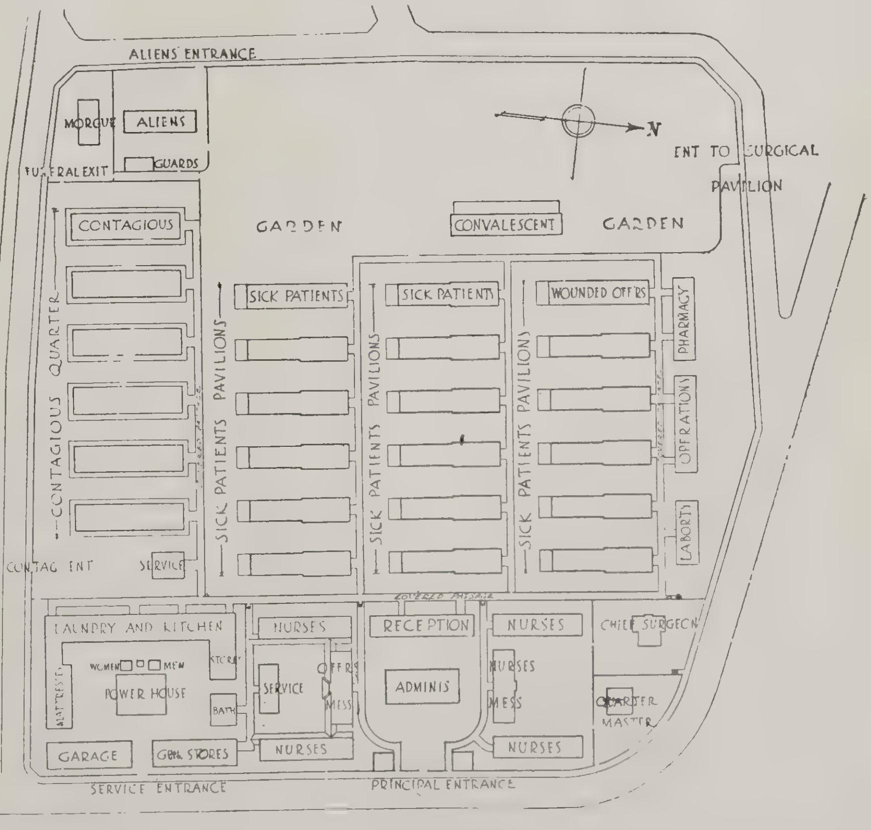
Back of the field hospitals lie the great centres such as Revigny and Bar-le-Duc, to the rear of Verdun, Belfort in Alsace, Bray and Amiens in the Somme, where the wounded are counted by thousands instead of by hundreds, and where the final sorting out is done.

At Bray, which I visited in October, the group contains 3,500 beds, divided into a hospital of 1,000 beds for the seriously wounded who are not transportable, a *dépôt d'éclopés* of 1,000 beds for the slightly wounded and slightly ill, and an evacuation hospital of 1,500 beds for those who are to continue to the rear on hospital trains. The hospital proper is of the unit construction portable house type, equipped for giving first-class surgical treatment.

It was a hospital of this type which I was asked to design to be erected as a model just outside of the gates of Paris.

This plan will serve to show the special requirements of war hospital planning. They are in relative importance as follows:

1. Reduction of road building to minimum.
2. Complete intercommunication between buildings by wheeled cars. Patients, food, linen, and supplies of all sorts are carried on wheels, and all buildings must be connected by galleries uninterrupted by steps.
3. Grouping of wards for easy service



PERMANENT MILITARY HOSPITAL AT ISSY-LES-MOULINEAUX, FRANCE.

and with proper north-south orientation and south end unobstructed.

4. Grouping of administration, technical and general services for easy communication and supervision.

5. Grouping of dwellings for staff, nurses, and orderlies for convenience and supervision, and with sufficient separation from patients' quarters.

Although, as a result of certain Governmental changes, the plan for the hospital at Vincennes was never executed, it has served as the basis for the plans of many other hospitals to be built all over France which were submitted for criticism to our committee.

An interesting development of the work of our committee is the plan for the permanent military hospital at Issy-les-Moulineaux. For this hospital complete plans had been prepared and approved just before war broke out; but as a result of the modifications caused by war experience, we were asked completely to replan the hospital, which in its general scheme of arrangement follows the war hospitals, but is executed in permanent materials.

On my return to the United States last winter I was asked to assist the Committee of Directors of Red Cross Base Hospital Units of New York, and the following plans for typical base hospitals show the result of our work in France as adapted to American requirements.

The site selected is assumed to be on the south side of a road, with the ground sloping slightly towards the south. The grouping of administrative and technical services around the ambulance court and the general services around the service court are to be noted, with the orderlies' quarters at the east and the nurses' and doctors' quarters at the west. The only road-building required is in the two courts, while the wards lying to the south are connected to the administrative and service buildings and dwellings by covered wooden walks.

The wooden slatted walkway, covered or uncovered, is as much of a necessity in a war hospital as it is in a trench, as mud is the bane of the front, and the slat walk which permits of its elimination, so far as the interior of the hospital is concerned, is invaluable, and as all differences of level are taken up by ramps in place of steps every part of the group may be reached by food trucks, wheel stretchers, and chairs.

The details of the plans follow in general the ordinary practice, with the necessary modifications to fit military needs. The reception building in its present form is, however, a very definite product of the war. As it must be assumed that every wounded man is filthy, even though not necessarily vermin-infested, it is essential that he be thoroughly cleaned before being admitted to the ward. The need of storage rooms for men's uniforms, boots, underwear, etc., and the necessary space for clean linen, surgeons' and clerks' offices, has led to the plan shown in the illustrations above.

In the centre is the receiving room, into which the ambulances discharge their loads. In this room the surgeon on duty makes a hasty examination, picking out those most needing prompt transport to the wards. They are then taken in order into the wash-room, where their pedigrees are taken, their valuables checked, and where after receiving their ward assignments they are cleaned in the table baths, put in clean hospital clothes, and wheeled away to bed, while their soiled clothes go to the disinfecting plant.

After being washed, disinfected, and repaired, their effects return to the building for storage, where their records and valuables are also kept. When the wounded man is finally convalescent, and ready to be discharged, he comes back to this building, turns in his check, and receives his uniform and personal possessions, and, after signing off, is discharged. The advantage of concentrating in one building the receiving and discharging of patients, together with the filing of their records, and the storage of their effects is obvious.

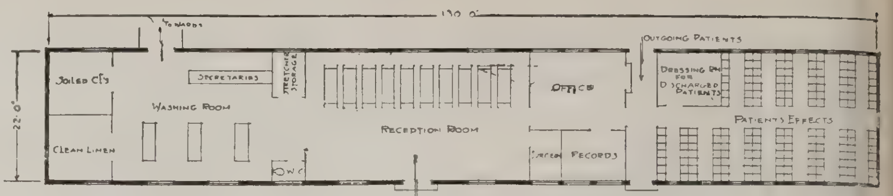
The administration building contains the usual general waiting-room and offices, but is considerably less important than the corresponding service in a civil hospital.

The operating pavilion is naturally of especial interest in a war hospital. The plan shows two entrances—one being reserved for patients, while the other permits the orderlies to reach the dressing preparation room and secure their provision of sterilised dressings for the wards without penetrating into the rest of the building. Other points to be noted are the two operating rooms, the larger planned to accommodate three tables if necessary and the smaller reserved for infected cases.

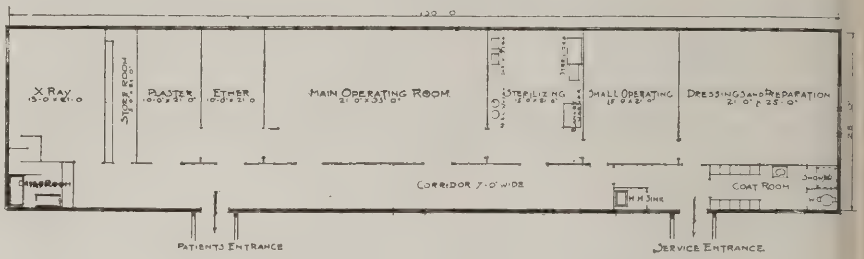
Easy access is afforded to the plaster and X-ray rooms by the corridor 7 ft. wide. It is to be noted that for the operating pavilion, the 20 or 24 ft. unit, used for most of the buildings, is insufficient, and the 28-ft. unit has therefore been adopted for this building, as well as for kitchen and laundry.

The pharmacy and laboratory building presents no peculiar features.

The plan of the kitchen is of interest, with its space reserved for the food cars adjacent to the scullery, all dishes being kept in the building between meals and the cars being loaded at a counter which extends the full length of the bakery and kitchen proper and serves as a barrier to prevent the orderlies from entering either room. The main entrance for supplies is on the court side of the building, with

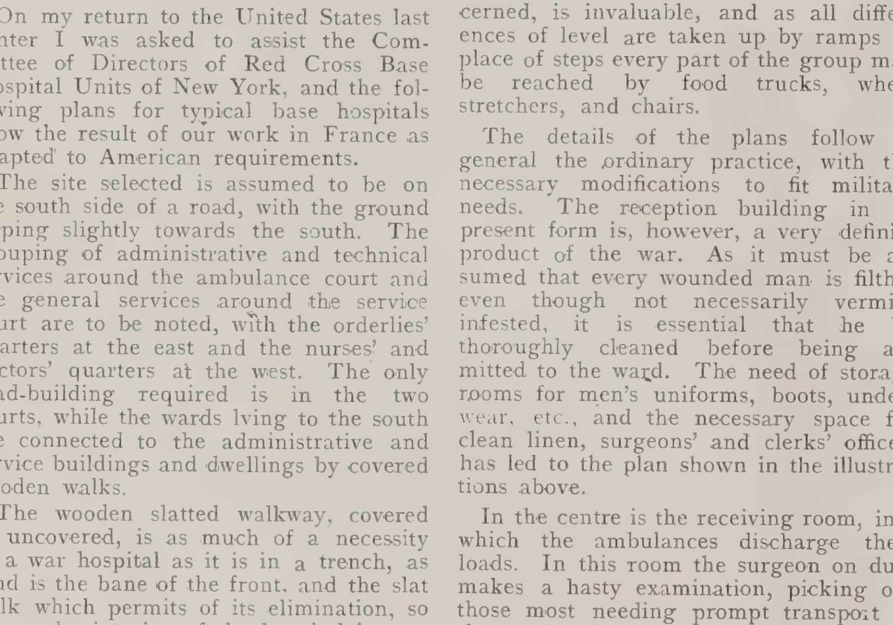


Reception Pavilion

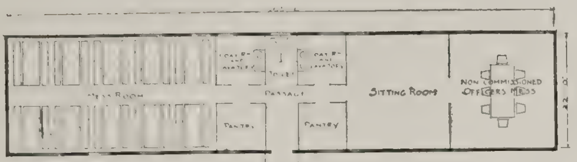


Operating Pavilion

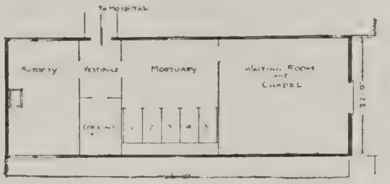
RECEPTION AND OPERATING PAVILIONS FOR A BASE HOSPITAL.



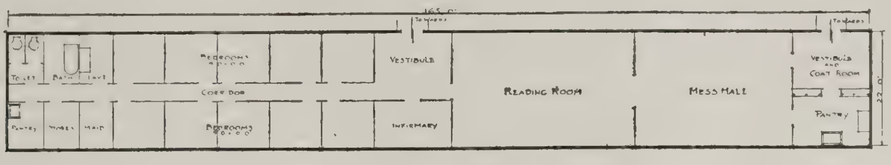
GENERAL PLAN FOR A BASE HOSPITAL.



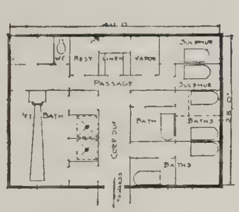
Orderlies' and Non-Commissioned Officers' Mess



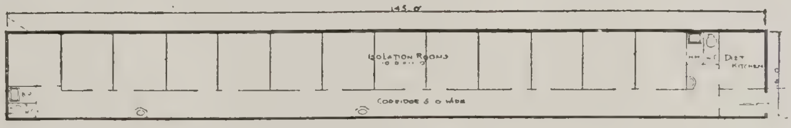
Mortuary Pavilion



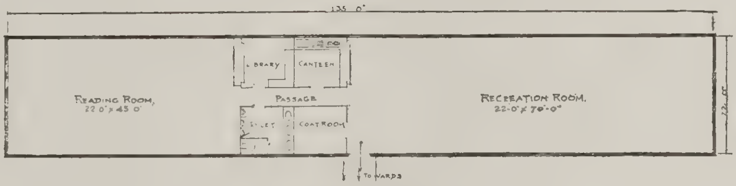
Head Nurses' and Mess Hall Pavilion



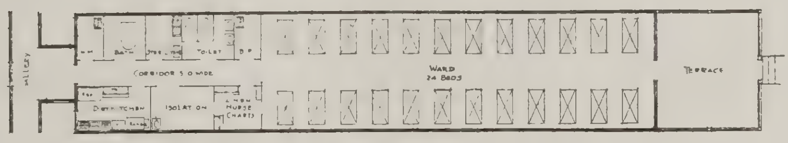
Bath Pavilion



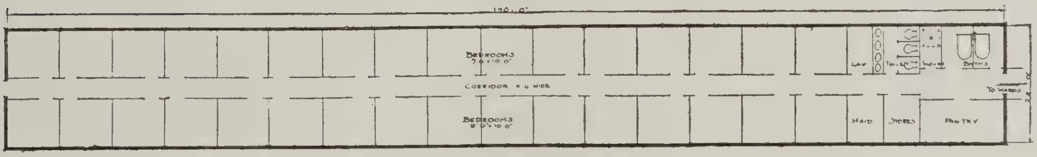
Isolation Pavilion



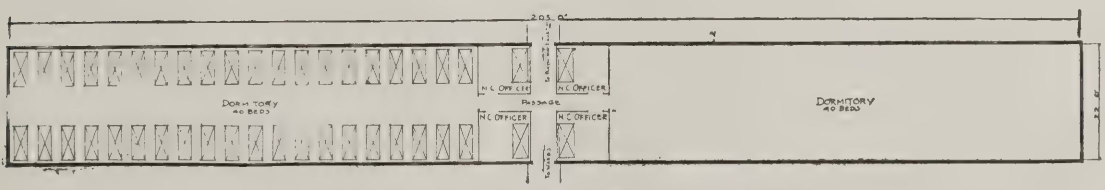
Recreation Pavilion



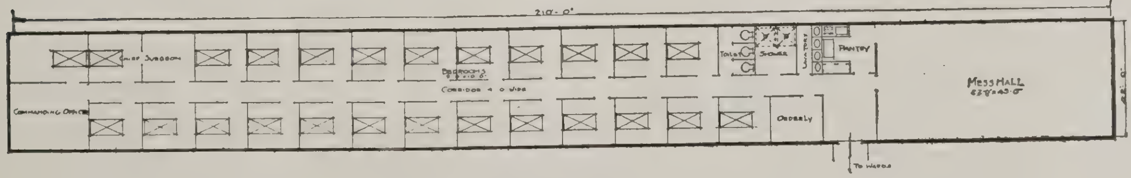
Ward Pavilion



Nurses' Dormitory Pavilion



Dormitory for Orderlies and Non-Commissioned Officers



Staff Pavilion

PLANS OF BUILDINGS COMPRISED IN A BASE HOSPITAL.

office for the receiving clerk and vegetable and grocery storage, refrigerators, meat room, and vegetable preparation room.

In view of the fact that much of the linen and clothing is contaminated, the laundry has two receiving rooms—one for ordinary soiled linen and one for linen, clothing, mattresses, etc., requiring sterilisation; these pass either through the sterilising washer or the steam and formaldehyde steriliser into the laundry proper, where they join the other linen and are thenceforth treated no differently from the rest.

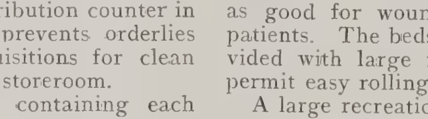
The storage space for mattresses and pillows and for clothing awaiting condemnation should also be noted, and the size of the repair room and general storage rooms, also the distribution counter in this last room, which prevents orderlies coming with their requisitions for clean linen from entering the storeroom.

The ward buildings, containing each twenty-four beds in the open ward and one in an isolation room, show the consistent development of the war hospital towards the standards of civil practice.

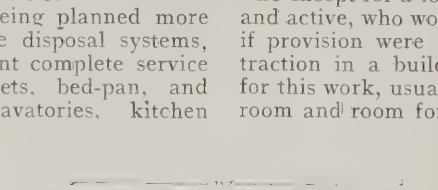
Base hospitals are being planned more and more with sewage disposal systems, and in the case in point complete service is provided with toilets, bed-pan, and housemaids' sinks, lavatories, kitchen sinks, etc. As relatively few wounded can be bathed in the ordinary tub there are no bath tubs in the ward buildings, but instead a small central bath-house is provided, thus materially reducing the expense. An isolation room is provided in each ward unit, also a surgical dressing-room, diet kitchen, and nurses' office and linen closet.

Following the custom of civil hospitals, the wards are oriented north and south, and the south end is composed entirely of windows so as to permit the greatest possible amount of sunlight to enter. At this south end is placed, on a level with the ward, a terrace, on to which the beds may be wheeled in clear weather, for experience has shown that fresh air and sunlight are as good for wounded as for tubercular patients. The beds must therefore be provided with large rubber-tyred castors to permit easy rolling.

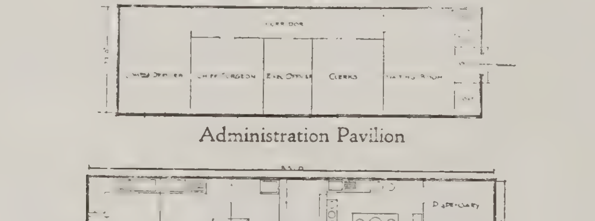
A large recreation building is provided, which may also serve as convalescent mess—it must be borne in mind that in the average war hospital there are many men who except for a local wound are quite well and active, who would be difficult to handle if provision were not made for their distraction in a building specially set apart for this work, usually divided into reading-room and room for games.



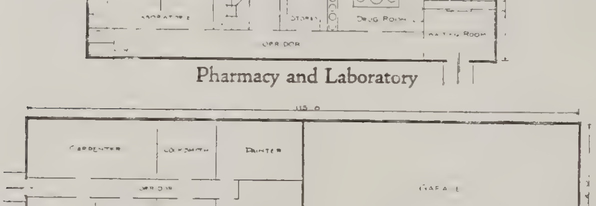
Administration Pavilion



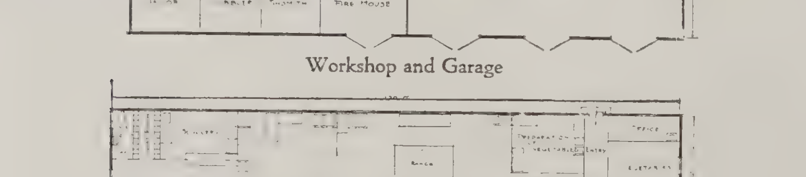
Pharmacy and Laboratory



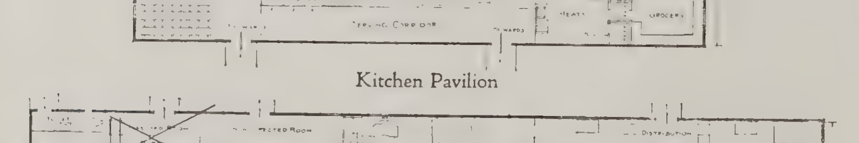
Workshop and Garage



Kitchen Pavilion



Laundry Pavilion



Storage Pavilion

PLANS OF BUILDINGS COMPRISED IN A BASE HOSPITAL.

The French authorities have solved problem of drinking by providing a teen, at which each convalescent pat may buy drinks to the extent of one d per day—a simple method when ther but one source of supply. No treatin allowed.

The isolation buildings are desig merely to care for contagious cases w may develop in the hospital, until time as they may be evacuated to the tagious hospitals.

Individual rooms or cubicles are provi for the medical staff and for the nur while the orderlies are grouped in do tories.

Almost as important as the planning base or field hospital is the choice of m rials and type of construction, and here have much to learn from the experienc our Allies. On the British and Fre fronts portable house unit type const tion is employed almost to the exclusio other types, the theory being that t buildings will pretty certainly be move some stage of their career; there is also thought that the unit construction build may be of service after the war for tem rary use in the regions so completely de tated in France and Belgium. Port house construction is not used with idea that hospitals will be taken down re-erected in three or four hours, as s manufacturers claim for these buildin but it does seem advisable to use a typ building which may be transported and erected if desired.

NEW DESIGNS FOR BELFA CATHEDRAL.

Mr. P. Macgregor Chalmers, the ne appointed architect for Belfast Cathed has submitted important drawings for consideration of the Cathedral Board. veral striking and effective changes h been introduced into the original plans Sir Thomas Drew. The new plan (s the Belfast "Evening Telegrap shows an eight-sided central tower stead of the square tower. The front the cathedral is represented by a porch the centre with two great square tow at each side. The organ will be placed the south transept. Underneath the or loft will be a chapel useful for daily vices. In the other transept will be larger chapel.

The picture of the completed Bel Cathedral of St. Anne's, with which Belfast public have now been l familiar, represents only a sketch by late Sir Thomas Drew, conveying an i of the form which in his opinion the bu ing might ultimately assume. It n have been the half-expressed thought t the new architect had but to perfect elaborate the plans left by his predecess Sir Thomas Drew and Mr. W. H. Ly but such is not the case. As is pointed in the current issue of the Cathedral ma zine, in a vast structure like the cathed only the barest outline is at first c ceived, and complete plans are only p pared as the work proceeds.

Many have felt that, while they co not but admire the beauty of the struct as conceived by Sir Thomas Drew, and revealed in his sketch, there would h to be considerable modification of design. It was generally felt that lofty square tower that rose from centre was hardly in keeping with Rom esque architecture, an octagonal, or eig sided tower being more usual on su buildings.

rther, the façade or porch, which
such a distinctive feature of Sir
nas Drew's picture, seemed to not a
accomplished artists to be too mas-
Its height, rising to the middle of
great western window, shut out a
deal of its beauty, and the great
1 of the porch jutting out so far in
would necessarily be all that would
een of the building by anyone who
close to the front. Persons standing
e the building and looking up would
have been able to see the height of
orch, and not the height of the main
ture, while the great west end would
it off from their view by the project-
orch.

e late Mr. Lynn had all these facts in
, and had already decided to modify
derably Sir Thomas Drew's idea. He
decided to build not a square central
r, as Sir Thomas proposed, but an
gonal one. He also greatly modified
açade or porch. As immediate build-
vas out of the question he, of course,
out no finished plans.

ter the death of Mr. Lynn the Cathe-
Board spent many months in secur-
he services of an architect who was
only eminent in his profession, but
was thoroughly acquainted with the
anesque type of architecture. Mr.
mers was offered the position and ac-
d it, and it is with great interest his
drawings, which are now exhibited
e cathedral, have been received. Mr.
mers came to the work with a fresh
, only having the guidance of the part
ie building which has been already
ed, and at the same time a ground
of the structure as originally drawn
ir Thomas Drew.

e new plans, taken as a whole, pre-
in the opinion of our Belfast con-
orary, the vision of a really beautiful
anesque church. The main ideas of
previous architects have been faith-
adhered to. The chancel, crossing
transepts are to be on exactly the
lines as the present nave. But while
main lines are the same as those
nally suggested, Mr. Chalmers has
, as we have indicated in our opening
graphs, several striking changes.

ie eight-sided central tower is Mr.
mers's suggestion, and his design for
extremely beautiful. He pictures the
of the cathedral as a central porch
two great square towers at either side,
height exceeding that of the Albert
orial. The fact that the porch occu-
only the centre of the west front natu-
reduces its height. Thus the height
e porch will only reach the bottom of
vest window. This window will be in
iew, which is regarded as a very great

ie central tower will reach the
stic height of 260 ft. and when for
oses of comparison we state that the
rt Memorial is about 120 ft., it will
t to an adequate conception of the im-
ıg character of the structure as now
ned. Mr. Chalmers also proposes
lace the organ in the south transept,
is the transept that will be built out
ıe right hand side as one enters the
dral. In this transept, towards the
ı wall (the wall with its back to Talbot
t) it is proposed to build two arches
ar in height and width to the present
es that are down each side of the pre-
nave, and on the loft made of these
es to place the organ with the chapel
ıl for daily service under the organ
In the other transept (the one that
d go out towards Academy Street) a larger chapel, capable of holding some 200 or 300 worshippers, is suggested.

The plans have already been before the Cathedral Board, who have considered the drawings with such care as has been possible in the time at their disposal. They have unanimously passed a resolution expressing their admiration of the drawings, but also stating that they did not feel able without fuller consideration to express an opinion as regards the detail.

HOUSING MOVEMENTS.

Five Thousand Dwellings for Swansea.

The Swansea Town Council have approved in principle of a scheme which provides for the erection of 5,000 artisans' dwellings on the corporation estate at Town Hill after the war.

A Thousand New Houses for Barrow-in-Furness.

A representative of the Ministry of Munitions has been sent to Barrow to prepare a scheme for the construction of a thousand new houses with the greatest possible rapidity. The town's medical officer, however, puts its requirements at 3,000.

1,500,000 *More Houses Wanted.*

At St. Martin's-in-the-Fields, Mr. Douglas Eyre, of Oxford House, Bethnal Green, said that four million of our fellow-creatures in this country were living in overcrowded conditions. In London 3,000 people were living eight in a room; 7,000, seven to a room; and 26,000, six to a room. Of London's population 20 per cent. at least lived under lamentable conditions. The country needed 500,000 new houses to replace those that were insanitary, 300,000 to overtake the deficiency in building of the last seven years, and 700,000 to provide for the increase in population. This was equivalent to the erection of 1,500,000 tenements, or 7,500,000 new rooms. In Bethnal Green 40,000 out of the population of 130,000 were living under insanitary and overcrowded conditions. The borough possessed five condemned areas, of which Brady Street had a population of 470 per acre.

Bristol's Municipal Housing Scheme.

Bristol Health Committee have decided to recommend the corporation to erect immediately after the war 2,000 workmen's dwellings towards meeting the shortage. A letter was read from the Local Government Board stating that the shortage of houses was a pressing social problem, and that if an approved scheme were carried out the Government would give substantial financial assistance. It was stated that at Bristol about 3,000 houses for working-classes were needed at present, and probably another 2,000 would be required by the end of the war, so that apart from the municipal scheme there would be plenty of scope for private enterprise.

London Housing.

Having considered the Local Government Board's circular letter inviting suggestions for the provision of housing accommodation after the war, Poplar Housing Committee report that they are of opinion that the housing accommodation in the borough is insufficient to meet existing demands; but the only land available suitable for an extensive housing scheme is on the Isle of Dogs, where there is a considerable shortage of dwelling accommodation. The committee suggest that the London County Council, as the housing authority for London, should prepare a scheme for the whole of London, as they think it undesirable that Poplar Council should embark on a housing scheme.

Housing Scheme for Stirling.

At the monthly meeting of Stirling Town Council, it was agreed that in reply to the Local Government Board's inquiry with reference to the provision of houses for the working classes after the war, the Council should state that they were prepared to carry out a housing scheme of from fifty to one hundred houses in Winchelhaugh Park in addition to the houses there and in Broad Street and St. Mary's Wynd, which require to be provided under the St. Mary's Wynd improvement and rehousing scheme. A motion by Councillor Derrick as to constructing a bridge over the Forth to Cambuskenneth with the object of opening up the feuing ground there for housing for the working classes, and as to the advisability of applying for an extension of the burgh boundaries to include Cambuskenneth, was remitted to a committee.

NEWS ITEMS.

Change of Address.

Messrs. The Simplex Concrete Piles, Ltd., announce that their offices have been moved to 104, Victoria Street, Westminster, S.W.1, their late offices at Palace Chambers, Westminster, having been requisitioned by the Government.

Memorial Chapel for Hexham Abbey.

At a vestry meeting held in the Abbey Church, Hexham, assent has been given to the proposal to erect a chapel in the Abbey as a memorial to Lieut. Cuthbert F. Savage, N.F., killed in action. He was the son of the Rev. Canon Savage, Rector of Hexham.

Supposed Greek Temple Found in Palestine.

It is stated that soldiers digging in the Wadi Guzzi have turned up on a high hill the ruins of a supposed Greek (?) temple, with beautiful mosaic floor of stones in green, red, white, black, and yellow—pictures of fish, lions, tigers, birds, with the swastika.

A New Property-Owners' Association.

Property owners in Manchester and district have decided to form a new society, to be called the Manchester and Counties Property-Owners' Association. Apart from taking steps to protect owners, the association will consider schemes for the housing of the people, support the abolition of the stamp duty, and advocate that all rates be paid direct, and that all removals be registered at the Town Hall.

Proposed Opera-house for Manchester.

Interviewed at Manchester by a newspaper representative, Sir Thomas Beecham said he would meet the city more than half-way if they would offer him a site for a Grand Opera House, which he would build and run for some years. "Manchester ought really to have such an institution," he said. "Think of the honour it would be to be first in the field. And if someone acts now the erection might start at once after the war." Such a theatre, he stated, would have to be specially built, and would not be, as so many English ones are, equally "suitable for a cat show, a sewing meeting, gala, or a revue."

PUBLISHER'S ANNOUNCEMENT.

THE question of the cost of Advertising is governed entirely by the circulation of a publication. The prices for small Advertisements enumerated below are framed upon the lowest possible basis in order to allow the use of the columns of the Journal for "Wants," &c., at a figure well within the reach of everyone.

Advertisers are purchasing the circulation of a paper in buying space for their announcements, and we are able to announce that "The Weekly Nett Sale of The Architects' and Builders' Journal is larger than that of any other Architectural Journal."

Appointments Wanted.

4 lines (about 28 words) 1s. 6d.; 3 insertions, 3s.

BUILDER'S Foreman of Works seeks re-engagement. Keen and practical. Town and country experience for London firms. Age 44. Trade, carpenter and joiner. First-class refs.—F. S., 52, Kingsley Road, Wimbledon, S.W.19.

BUILDER'S General Assistant (disengaged) desires another London post. Expert in accounting, bookkeeping, costing, with some practical knowledge and experience in estimating.—John M. Fife, 19, Campden Street, W.8.

CLERK of Works (disengaged) desires appointment. Four and a half years with last employer. Experience in large jobs. War cause of being disengaged. —Reply to C. L., 241, Rosendale Road, London, S.E.21. 39

CONTRACTOR'S General Foreman (46). Speedy war construction. Dumpty level. Expert draughtsman, measure all trades. Strict investigation courted. Medallist Worshipful Co. Carpenters.—81, The Avenue, Bedford Park, W.4.

SUB-CONTRACTS or General Foreman; good experience on W.D. contracts; carpenters' work preferred, —A., 39, Albert Road, Walthamstow, E.17. 30

THE Association of Builders' Foremen and Clerk of Works, 56, Old Bailey, E.C.—Experienced Foremen and Clerks of Works can be obtained by applying to the Secretary, Mr. J. W. Sawyer, 214, Clapham Road, S.W. Competent foremen and clerks of works are invited to join this Association.

WANTED, brickwork or pointing in any quantity. Town or country.—C. Hendon, 53, Langdon Road, Junction Road, Highgate, N. 42

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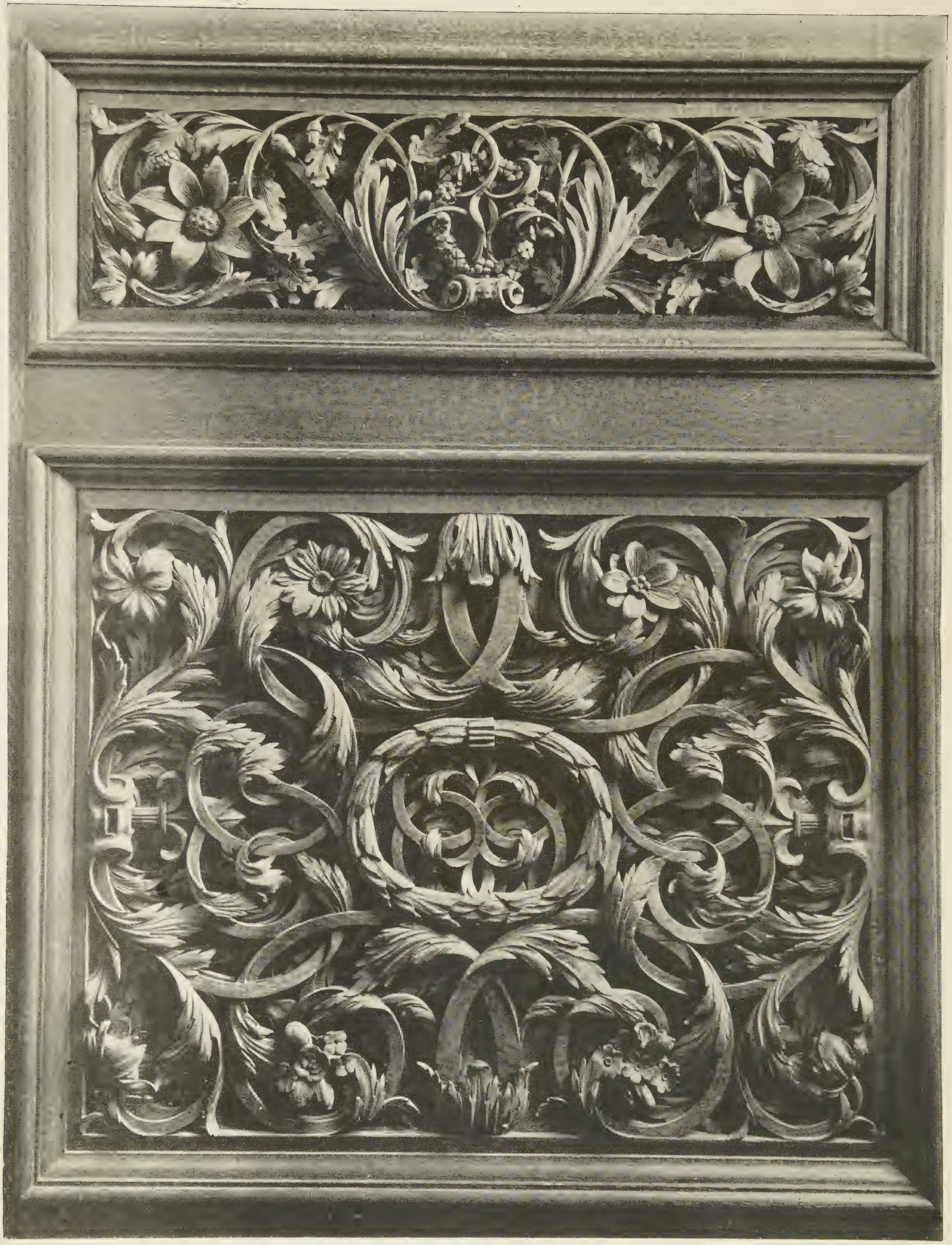

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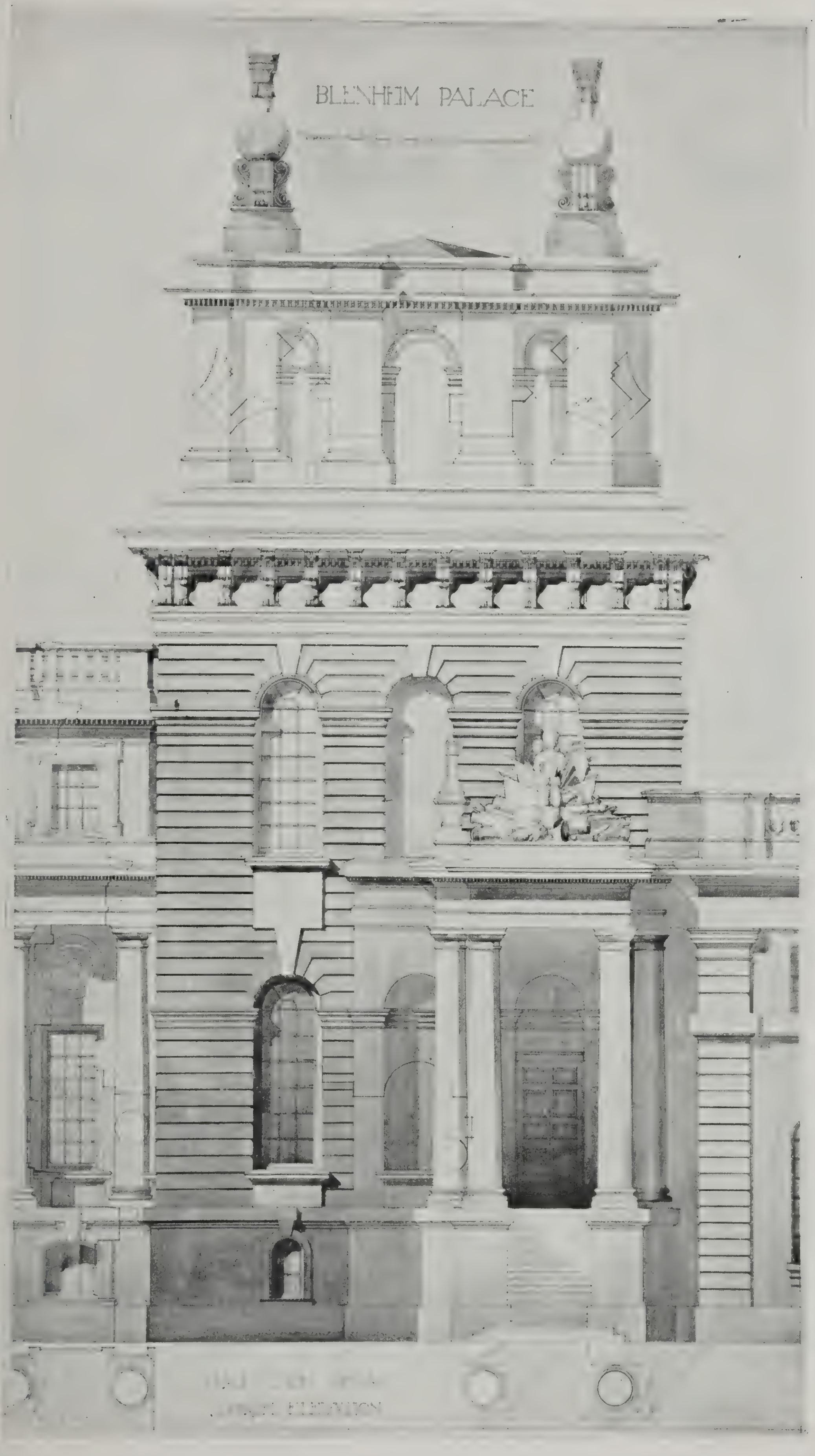

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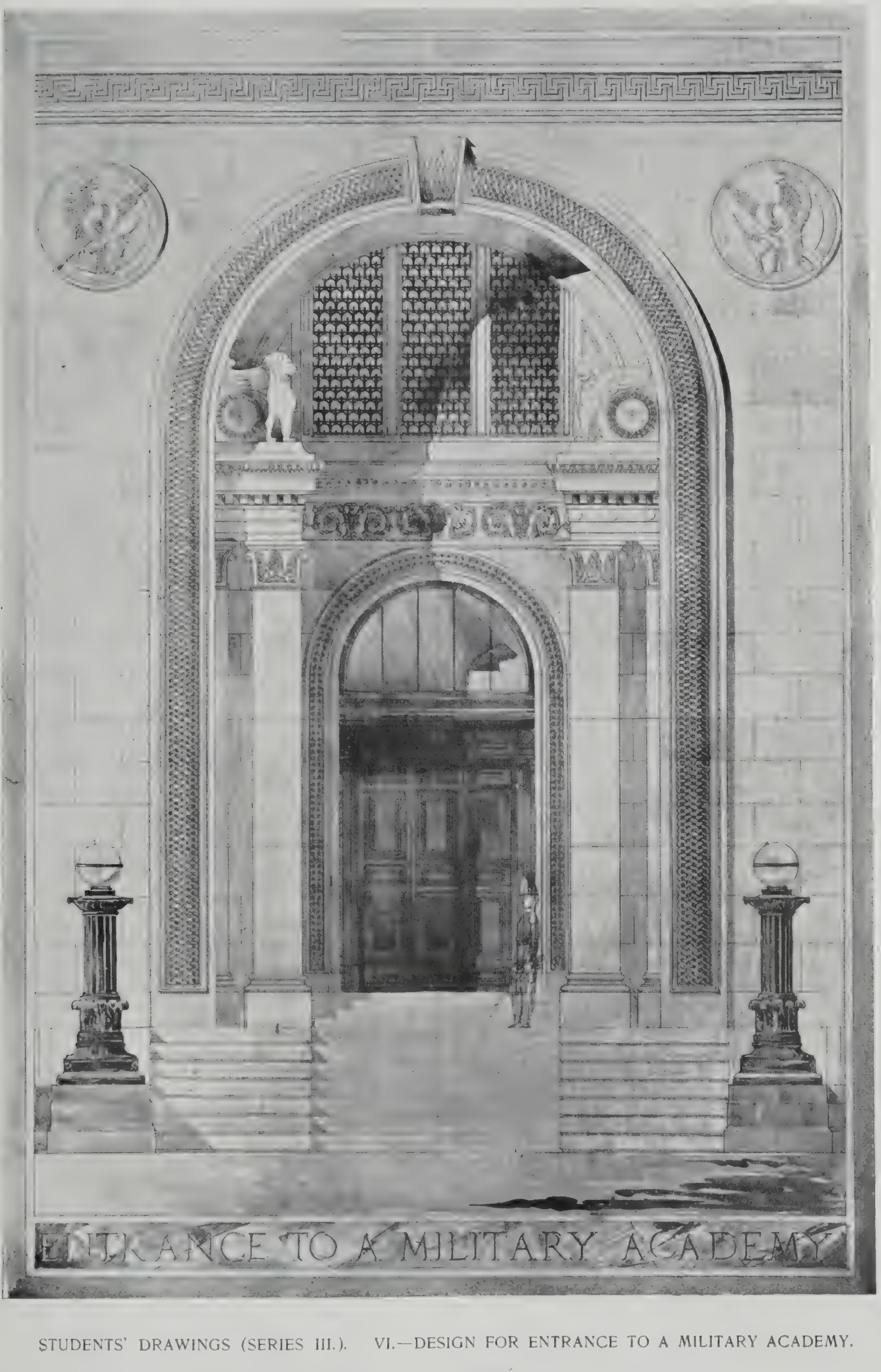

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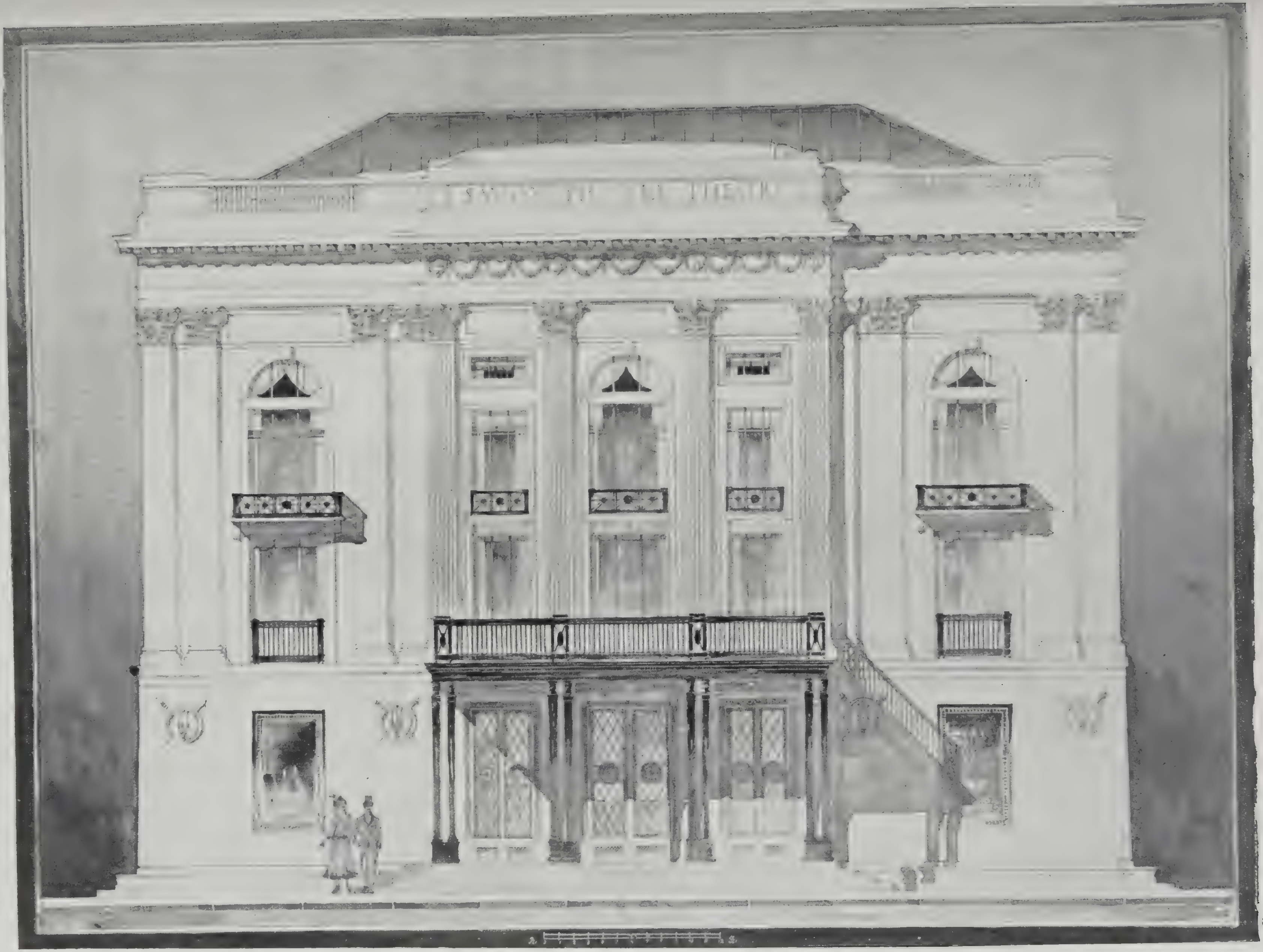

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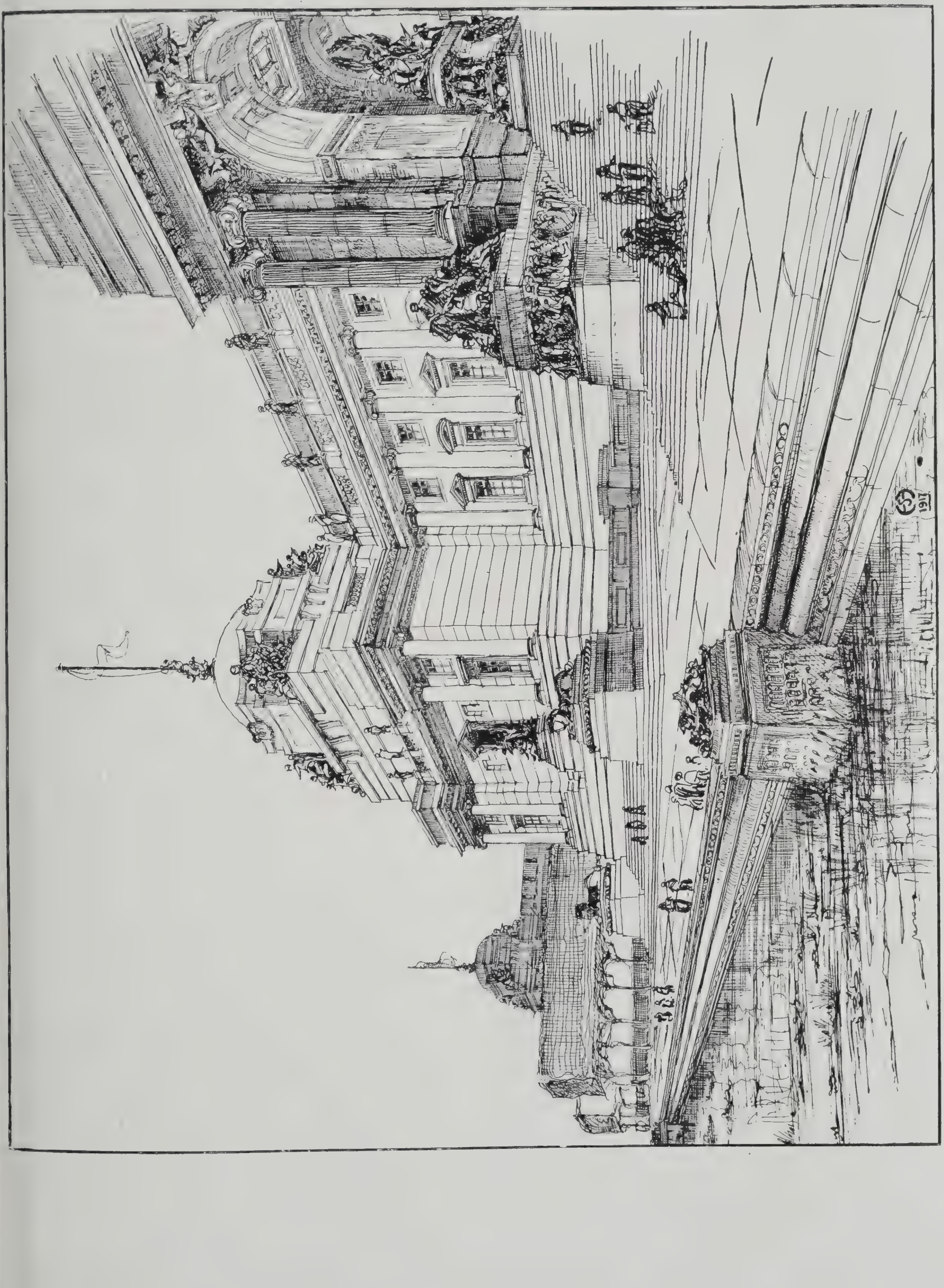

ARCHITECTURAL IDEAS.—V. BY AN ARCHITECT ON WAR SERVICE.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

OCTOBER 3, 1917. TOTHILL STREET, WESTMINSTER. VOLUME 46. No. 1187.

NATIONAL PAPER ECONOMY.

ing to the very necessary Government restric- on paper supplies, all elements of waste must gorously excluded. Our readers, we are sure, gladly assist in promoting this object, which is m in national economy. They can co-operate us effectually in either of two ways—(1) By ng a direct subscription for this Journal, or (2) acing with a newsagent an order for its regular ery. Casual purchases—now here, now there— a serious discrepancy between supply and nd, and cause a wastage of effort and materials could obviously be reduced to a minimum but he casual and erratic purchasing which we stly ask our readers to avoid.

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a semi-official announcement made in last riday's newspapers, that "it is probable that more an two hundred thousand subsidised workmen's ges will be erected in different parts of the ry," it was added that these will be of "cheap but ic type." Although "cheap" is a rather discon- g word, it is not indissolubly associated with ty"; nor is there any necessary incongruity en economy and beauty. Any form of excess, ing lavish expenditure, is rather incompatible the simplicity and serenity which are essential to art. "Artistic" is another word that it might been well to avoid. It is a word of terror alike to chitect, who recalls with a shudder what ill deeds been done in this name, and to the practical- ed person, for whom it implies a flat contradiction word "cheap," which he will view with the pro- not ill-founded suspicion that it was chosen for cification, to neutralise the acid he would be sure tract from the term "artistic." It is, however, a mistake to suppose that architectural propriety, deed, any manifestation of art, is necessarily . Art is in itself an economy of means, and is oniously compatible with economy of money. It ost no more to give these national houses a ly exterior than it would to make them the me of ugliness. Beauty is worth much and costs and the popular notion to the contrary seems to from a misconception of the word, which is often sed with meretricious and superfluous decorative s. But "the form, the form alone, is eloquent"; t is surely not too much to expect that these two red thousand national cottages shall be of truly ectural design. If by sad mischance they should mean appearance, they will be by no means an xed blessing. But we shall know more about when the Government make a definite announce- on the subject, which is expected on October 15.

* * * *

using has been, during the past week, the subject pious discussion in "The Times." It was not to pected that any new points could emerge from niliar a theme, but nevertheless there is consider- advantage in lucid restatement of facts and argu- s upon which must be based a policy that is as shaped. This recapitulation is peculiarly gratify- an instance emphasised by Mr. J. S. Furley, who es his attention to a matter that is in consider- peril of neglect. Government, he says in effect, be trusted to deal effectually with all material issues, and even with the essential principles of town planning, but "beauty of exterior" may possibly be regarded as outside the official province. But "it will be a grievous pity if the present unique opportunity is lost, and the dreariness and unattractiveness in building that have disfigured England during the last century are to continue, especially when so much has been done by garden-suburb and other schemes to show how immense an improvement is possible." Unfortunately, Mr. Furley is no doubt correct in assuming that the argument against him is "that the State has no right to make the working man pay for so immaterial a thing as beauty. But," he continues, "houses are permanent things; and is the working man, or those who arrange building schemes for him, to be allowed to disfigure England for centuries to come? Nor does anyone believe that Labour itself wishes to be housed in a way that is an insult to its self-respect." It is, as we have said on previous occasions, in the magnitude of the operations that the danger lies. As there is so much to do, there will be a strong temptation to do it hurriedly and badly. It is an unexampled opportunity for multiplying examples of ugliness or of beauty; and beauty being, as Mr. Furley says, regarded as an immaterial thing, the chances are that it will not be sufficiently considered.

* * * *

Is beauty an immaterial thing? It may be intangible, but it is of potent effect. Certainly the neglect of it would stamp this generation as hopelessly materialistic and dully insensitive to the subtle forces that are more powerfully dynamic than those that are grossly physical. Its effects, though not less energetic than those of, say, electricity, are generally ignored because they are less immediate and less easily demonstrable. Being psychic and elusive, insusceptible of being weighed, counted, and expressed in terms of cash equivalents, they are assumed by matter-of-fact persons to be non-existent, a figment of the imagination. But nothing can come from nothing. and imagination could not have conceived those effects without having something substantial to work upon. Besides, they are much more than a matter of faith. They are of reasonable inference from observation and from personal consciousness. If environment produces, in time, such grossly physical effects as changing the colour and conformation of a reptile, a bird, or a quadruped, its mental effects may be fairly assumed to be at least equally potent. But there is no need to labour a point that is beyond dispute. Houses must be made comely not to satisfy an æsthetic whim, nor to gratify a sensuous taste, but to promote cheerfulness, health, efficiency, contentment, among their inhabitants, who unconsciously assume the tone of their environment. Ugly houses are a direct incitement to ill living by a sort of hypnotic suggestion. A plea for due attention to architectural treatment of dwellings is ultimately and essentially utilitarian.

* * * *

With respect to war memorials in churches, it is evident that the stained - glass window greatly prevails. This was inevitable, because of the all-pervading popularity of pictures. Certainly no other form of memorial can compete with glass in the quality of arrestingness; for it conveys its message or tells its story more vividly in both subject and colour

—more pictorially, that is—than is possible to brass or stone or terra-cotta. It is this very assertiveness that condemns it to the sensitive eye; while its ever-increasing commonness, and its consequent exhaustion of theme and sameness of effect, rather tend to surfeit. But the chief objection to stained glass is purely practical. It darkens the interior, excluding wholesome sunlight that is hardly anywhere more needed than in churches, which, being seldom satisfactorily ventilated, are commonly loaded with disease germs to which sunshine is inimical. As churches depend very much on window ventilation, and as stained-glass windows cannot be expected to perform this duty satisfactorily, if at all, the ambition to have a pictured window in every opening is hardly commendable. Either such windows are, as they should be, impracticable for opening and shutting, or, if a part of them is made movable, the performance of its auxiliary function ruins the picture both physically and æsthetically; while repeated opening and shutting are certain, sooner or later, to result in breakage. Plain glass, fulfilling its useful duties with all the dignity of simplicity, is, in truth, much more admirable than the average pictured window, because it gives so much less scope to blatancy and banality. One virtue the newly installed coloured window has over too many of its kind that were erected a few years ago. It was not, as they were, made in Germany.

* * * *

Architectural research has thrown a sidelight on an expression used by Jane Austen in "Northanger Abbey." General Tilney, it may be remembered, was "very particular in his eating," and in his choice of words. In the twenty-first chapter the General is at dinner. "The dining-parlour was a noble room, suitable in its dimensions to a much larger drawing-room than the one in common use, and fitted up in a style of luxury and expense which was almost lost on the unpractised eye of Catherine, who saw little more than its spaciousness and the number of their attendants. Of the former she spoke aloud her admiration; and the General, with a very gracious countenance, acknowledged that it was by no means an ill-sized room; and further confessed that, though as careless on such subjects as most people, he did look upon a tolerably large eating-room as one of the necessaries of life." Miss Katharine A. Esdaile writes in "The Times" Literary Supplement for September 27 that she has been constantly perplexed by the expression "eating room." "The apparent touch of slang seems out of keeping with the picture, not to be reconciled with the elaborate manners and as elaborately chosen phraseology of the owner of Northanger Abbey."

* * * *

Miss Esdaile proceeds to elucidate the mystery. "Fate, however, which has led me of late to the cataloguing of eighteenth-century works on architecture" (surely it was a benign fate that set the lady so delightful a task) "has supplied an unexpected explanation. The countless designs for houses, rural villas, retreats, and the like, published by Richardson, Lewis, Papworth, and others, between 1790 and 1810, are full of plans of country houses of various sizes which have one thing in common: the use of the word 'eating-room' for the older dining-room or dining-parlour. . . . General Tilney, then, is talking not slang but the very latest thing in architectural terms." We heave a sigh of relief: the General's reputation is saved. "Eating-room" is not slang, and its introduction "is one more instance of Miss Austen's delicacy of touch." Miss Austen's reputation also is saved. Architectural research has preserved her from the intolerable reproach that for once in her career she had stooped to the use of slang. In nearly all her few and precious novels, the descriptions of interiors are so full that it might almost be possible to draw plans from them. Miss Esdaile's definition of slang might
perhaps might not) relieve us of a greater perpl
than that into which she confesses to have
thrown by the use of the term "eating-room."
not a pretty expression; yet even though architec
sanction had not invested it with a certificate of
or less factitious respectability, one would hardly
to condemn it as slang. But, curiosity being pi
one would rather like to know what architect first
it and why, what architect first discarded it, an
exquisite reason. Evidently the French see no in
vulgarity in the word "eating," or they would
discarded long ago the almost equivalent expre
"salle-à-manger." "Dining-parlour" may be a
refined term; but is not a parlour a place for talk

* * * *

It is not wholly regrettable that art gives ris
frequent occasions for public controversy.
stimulate interest and prevent stagnation. Ha
have the echoes of the Romney picture dispute
away, when there arises a rather exciting newsp
correspondence about rival statues of Abra
Lincoln. Any educational value that it may ho
however, to some extent discounted by the unti
ness of any sort of misunderstanding, no matter
trivial, with our American cousins. Not tha
infinitesimally small an issue can reduce by a s
degree the warmth of the affectionate sympathy
which the two peoples have clasped hands; bu
delightful is that sympathy that we could have wi
that no shadow of a shade of apparent disagree
of any kind whatever should interfere for a s
moment with our enjoyment of it. And it shall
Put briefly, the facts are that we are anxious to ha
statue of Lincoln at Westminster, and that we
been in some danger of inadvertently accepti
statue of which many eminent Americans disapp
It was at first understood that the statue for which
Government had gladly offered a site would
replica of the fine rendering by Augustus St. Gau
For some reason that is not made clear, the
Gaudens replica proposal did not materialise;
eventually Mr. Charles P. Taft very generously of
a replica of Barnard's statue. About the merit
Barnard's statue there is considerable differenc
opinion, the main objection to it being that Pres
Lincoln's son, Mr. Robert Lincoln, strongly d
proved of it. On the other hand, there are exce
judges who speak very highly of it as a work of
and the only rivalry is between the advocates of t
Gaudens and of the Barnard statues respectively.
on this side of the water are but neutral spectator
conflict in which we would fain hope that both
might win. Then we should get two statues inste
one; although to us would probably fall the de
task of determining which statue should stand in
of Westminster Abbey, and which should dignify
worthy site in some other of our great cities, any
of which would joyfully welcome it, because in
country the veneration for Abraham Lincoln is h
surpassed in his own. We should then have a t
of statues of Lincoln; for there is already a rathe
one in the Calton cemetery, Edinburgh, near
remarkable monument to David Hume.

* * * *

The death of M. Hilaire Germain Edgard
last week at the age of eighty-three was quickly
lowed by that of Mr. C. Napier Hemy, R.A.,
passed away at the age of seventy-six at Falmou
Sunday last. Degas's early struggles and ult
triumphs are familiar history. He is perhaps
described as a realist with a romantic touch, ar
was perhaps only less great than Ingres. Hemy
possibly rank hereafter as our greatest marine pai
his temporary popularity, at all events, was
putable.

HERE AND THERE.

WRITING in the midst of a gorgeous air raid, but far enough away from it to feel that comparative coolness on the outskirts of the danger e is no great virtue, and that the inability to rshal one's thoughts in spic-and-span parade order ather a vice, I am led to reflect—somewhat discontedly it may be—on the sudden revival of respect the much maligned basement. At one time it was a ourite institution. It gave the world to understand t the house kept a servant. Nobody above the gree of a maid-of-all-work could be expected to st in such a hole. She, poor girl, commonly spent re not only her days, but her nights also. Sunless ys and noisome nights did not improve her health. e had her compensations. She could chat with her nirers, or submit her greasy palm to the "gipsy" tune-teller (whose palm also was tolerably well ased in the process), without being unduly conspicu- s from above or from below. She could "sneak :" unobserved by all but the "area sneak," who took vantage of her absence by purloining whatsoever ngs were portable inconspicuously. And in many other way the basement lent itself to subterraneous pravity.

* * * *

It became a stock subject for scurril jests. A ggerel song was sung about "Susans, Janes, and rys They all comes up their aireys When I go sing- by With my hearthstone and Flanders bricks, A nny a lump—who'll buy?" which conserves one of "street cries of old London." Another street cry, Milk below, maids," clearly refers to the area; and, I remember rightly, Wheatley's picture shows the lk-vendor as a woman bearing on her capable oulders a wooden yoke from which the milk-pails suspended. How history repeats itself! Before war you might not find a peripatetic milkmaid ough you searched London through. Now there is e in every street; though the vehicle she pushes kes more appropriate the term "perambulating"; d, street cries being forbidden, you do not hear ether she is a soprano or a contralto. Almost unintermittent yelling down the area by regular or casual wkers and traders, or by youths to whom hoaxing servant with base imitations of street cries was an proved form of sport, played a great part in creating aversion to the basement as a domestic proposin; but what sealed its doom was its abuse by the nates.

* * * *

Houses are apt to "come down" very rapidly with- t the aid of the housebreaker, and this process, once gun, spreads with extreme rapidity. When a sement house suffered this degradation, and several nilies filled it to overflowing, the basement became nmonly a culture den for disease germs. Pulmonary nsumption was so often traced to this source that gislative interference became necessary. Doctors de a dead set against basements. Girls of the mestic-servant class became sufficiently learned in new science of hygienics to decline to be interned derground, and the basement house lost its vogue. dvertisements of houses to let commonly carried the dendum "No basement," which was also put in as a e for the capture of the scarce and shy domestic rvant. Also the basement was apt to be damp and ldewy and subject to floods. Only a few months o, in London, a child was drowned in a flooded base- ent. There are, of course, modern methods of ndering a basement thoroughly damp-proof in itself, t that would be a cunningly devised waterproofing wder or paste which could prevent a burst water- ain from flooding the area; which, until by-laws sternly forbade the arrangement, was often situated below the level of the sewers, with some slight prejudice to the drainage of the area.

* * * *

In his standard book on "Residential Flats," Mr. Sydney Perks mentions that "Basements have always been general in Edinburgh; in the old days the people in the flats above often kept pigs there. These were allowed to roam the streets in the daytime, and were a sanitary precaution, in that they lived on the refuse thrown in the street. These pigs were often pets of the children, who rode them until they were thrown off." He adds, somewhat superfluously, that "even the children of the nobility are said to have done this." Why, of course they did it. Children, some sage has noted, are all democrats and levellers; and, in Scotland, as some other generalising observer has claimed, there is no proletariat; the people are all aristocrats, and hence it has happened that the same tall tenement in Edinburgh might house "a sweep and caddie in the cellars, poor mechanics in the garrets, while in the intermediate storeys might live a noble, a lord-of-session, a doctor, a city minister, a dowager countess or a writer." As heterogeneous a collection as you may find in a tube station during an air-raid; or, indeed, in any of the City shelters which Mr. Perks has so judiciously provided. These shelters are indicated by a bill stating that the public may take cover there at their own risk, and in many instances an apt quotation has been added in pencil: "If you knows of a better 'ole, go to it."

* * * *

As the anti-aircraft guns have just ceased their baying of the moon, it is probable that the raid is at an end, the raiders having skedaddled. This word I use in compliment to our American allies, by whom it was much used at the time of their civil war. It is thought by the learned compiler of "The Slang Dictionary" to be "very fair Greek," the root being that of *skedannumi*, "to retire tumultuously"; which is yet another instance of the easy adaptability of Classical architecture to modern needs. But the cessation of the din reminds me that I set out with the intention of rehabilitating the basement, whereas I seem rather to have laid stress on its shady past. If this war lasts much longer, basement houses will be at a premium; and the basements will be roofed and padded with sandbags. Then, in the "to let" advertisements the familiar phrase "No basement" will be superseded by "Bomb-proof basement." Now, the Hun has no inventiveness whatever. He cannot even invent a lie. He merely twists the truth, and is very economical of his raw material. At the day of reckoning, he will cite those sandbags as "fortifications."

* * * *

In partly revealing, the other day, the character of his defensive operations, the Lord Mayor of London was judiciously reticent upon one point. He mentioned that he always sleeps in an upper chamber of the Mansion House, and that in case of a raid he would descend to the basement; but he was careful to withhold the important military information of whether or not that basement is sandbagged. I cannot help hoping that he will never be compelled to descend in unseemly haste. A Lord Mayor, properly robed, and wearing his chain of office, could not fail to inspire confidence in the other refugees. A Lord Mayor in pyjamas. . . . But the spectacle is unimaginable. By the way, the Mansion House had at first a top storey, long ago removed, in which the Lord Mayor had his sleeping apartments; whence it was known as "the Mayor's Nest."

DIOGENES.

THE MINISTRY OF MARINE, PARIS.

THE Place de la Concorde is generally, and perhaps rightly, regarded as the finest open space in Europe. Certainly it is the finest in Paris—which to most people will mean the same thing, so firmly has the French capital established its supremacy among the great cities of the world. Known originally as the Place Louis XV., of whom it contained an equestrian statue, it was designed by Jacques Ange Gabriel in 1752, inaugurated in 1763, and finally completed in 1772. The illustration given below shows the Place as it appeared in 1789, at which time the two buildings by Gabriel (the one on the right is the Ministry of Marine) were used as Garde-Meubles. It is interesting to note the condition of the Madeleine at that date. As will be seen from the engraving, only the columns of the portico facing down the Rue Royale have been erected.

Gabriel's two magnificent buildings form the north side of the Place, flanking the entrance to the Rue Royale, their front being a continuation of the line of the colonnades of the Rue de Rivoli. Gabriel seems to have founded his design on Perrault's east façade to the Louvre, though with considerable modifications. Professor F. M. Simpson, in his "History of Architectural Development," criticises the substitution of single columns for columns in pairs on the upper storey. The arcaded ground storey, also, with its numerous openings, he considers by no means so reposeful as the corresponding storey in Perrault's design.

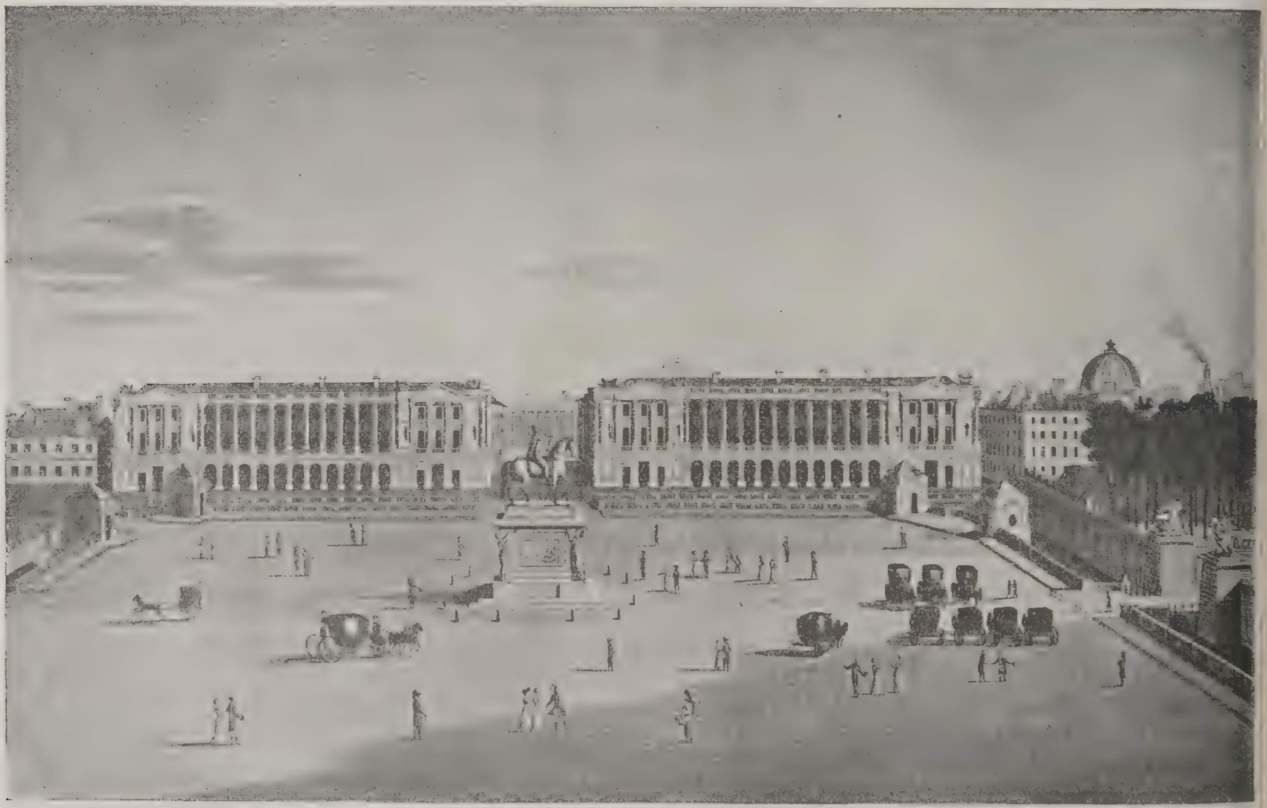
That Gabriel should have been influenced by Perrault's work at the Louvre is probably explained by his having been entrusted with the restoration of that building in 1755. He made a very close and careful study of the work, and became a profound admirer of the genius of Perrault, whose great colonnade he restored, afterwards undertaking the reconstruction of the opposite façade looking on to the court.

With this experience behind him it is perhaps only natural that, when his great opportunity came i
Place de la Concorde, he should have invested
design with something of the spirit of Perrault's
at the Louvre. The detail, as may be judged by
large reproduction on the double-page plate in
issue of one of the end pavilions to the Ministry
Marine, is delicate yet forcible, and, as Prof
Simpson says, of a character such as might be expe
from the architect of the Petit Trianon.

Gabriel's buildings have witnessed some of the
stirring and some of the most horrifying inciden
the chequered history of France, the Place de la
corde, of course, having been closely associated
the principal events of the Revolution. In 1792
equestrian statue of Louis XV. was removed
promptly melted down and converted into piece
two sous. In its place was set up a figure of
Goddess of Liberty. At the same time the nam
the square was changed from Place Louis X
Place de la Révolution. In the middle of the sq
on January 21, 1793, was set up the guillotine, w
had decapitated by May 3, 1795, no fewer than
persons, including Louis XVI. himself.

Under the Directory, when the worst period of
Revolution was at an end, and the Republic itself
disappearing, the Place again changed its n
becoming the Place de la Concorde, a title that
since been preserved.

Among the many interesting features of the mo
square are the eight colossal statues, representing
chief towns of France, seated on pedestals which
presumably designed by Gabriel. That of Strasb
is always draped in mourning in memory of 1871.
us hope that, before long, the drapery may be rem
The Place de la Concorde has thrice been occu
by enemy troops—by the Russians and Prussia
1814, by the English in 1815, and by the Prussia
1871.



THE PLACE DE LA CONCORDE, PARIS, AS IT APPEARED IN 1789.

A STATUE OF ABRAHAM LINCOLN FOR LONDON.

our editorial pages we comment upon the slight *contretemps* which has arisen with respect to the statue of Abraham Lincoln for which our Govern- at has offered a site near Westminster Abbey. The umstances are set forth in the following extracts n various communications which have appeared in he Times." Cabling on September 22, the Wash- ton correspondent of our contemporary alleged that uch concern and no little indignation were felt in highest circles at the news that Barnard's statue of raham Lincoln was actually cast and ready for ship nt to England, to be erected opposite the entrance the House of Lords." He cites objections to the nard statue by the late Mr. Choate, Senator Lodge, the late Mr. Robert Lincoln, son of Abraham ncoln. The last-named gentleman expressed him- very strongly against the Barnard statue; adding: should, of course, have filial pride in having a good tue of my father in London or Paris, but that my her should be represented in these two great cities a work such as that of which I am writing to you uld be a cause of sorrow to me personally."

)n the other hand, there is evidence that many npetent judges have expressed great admiration the Barnard statue as a work of art: and the sition is explained by the honorary secretary of the tish-American Peace Centenary Committee, who tes as follows to "The Times":—

"The statue of Lincoln which was originally pre- ited about three years ago to the British American ace Centenary Committee by the American Com- tee was a replica of the superb work of the great lptor Augustus St. Gaudens, which is universally knowledged to be the finest memorial in stone of great American. A site was found for it by the fice of Works facing Westminster Abbey, and it is hope of the committee to be able to erect it on that after the war.

'It was only recently that the committee was offered second statue on behalf of Mr. Charles P. Taft, while we did not decline the gift, we did not accept n substitution for the St. Gaudens statue, although Office of Works was ready to place the West- nster site at our disposal. At the last meeting of committee, held in July last, a cablegram was sent the chairman of the American Committee begging n not to ship the Barnard statue during the war. e relative merits of the statues have been inquired o and discussed by our committee, who were turally influenced by the views expressed by Robert ncoln, the late Mr. Choate, and others who knew ncoln well. Our secretary is now on a mission to United States, and will clear up any misunder- ndings which may have arisen with regard to the er of the second statue."

"The Times" is informed that the First Commis- ner of Works and his advisers are of opinion that, smuch as the Lincoln statue was a gift from the nerican Centenary Committee, it was impossible for m to refuse it merely on account of a wide diver- nce of opinion as to its merits, such as generally ists in connection with any important work of art. e question of site could, of course, be reconsidered, it was originally chosen for the St. Gaudens replica, t it is not possible to say whether this can be done til the statue has been seen and its suitability nsidered.

"The first offer of a statue of President Lincoln was de on February 14, 1914, by Lord Weardale, chair- n of the Executive Committee of the British Branch the International Committee formed to celebrate Hundred Years' Peace between Great Britain and United States. The offer was made to the British vernment on behalf of the American Committee, the donor being Mr. Charles P. Taft, a well-known art lover, possessing one of the finest art collections in the States. The matter was placed before the Cabinet, who gladly accepted the offer made on behalf of the American Committee.

"On March 14 of the same year Mr. A. Shirley Benn, M.P., joint acting secretary with Mr. Robert Donald to the British Committee, asked in the House of Commons whether the Government would grant a site for the statue at the south-east corner of the Canning enclosure, facing the Abbey. The reply was to the effect that the suggested site was being favourably considered. Later an offer was made of the site, which was accepted very gratefully by the committee as being admirably adapted to the purpose.

"Nothing more was heard of the matter until March of this year, when his Majesty's Office of Works received a letter from Mr. Robert Donald, on behalf of the committee, showing what progress had been made with the project. It was first thought that the statue would be a replica of one by Augustus St. Gaudens, but later the committee were informed that the statue by Barnard was, in the opinion of leading art critics in the States, much superior, and that a casting of it had been ordered, and would, it was expected, be ready in July of this year.

"The opinion of Mr. J. S. Sargent, R.A., was sought, but was not obtainable. Recently a communication had been received from the other side stating that 'wide divergence of opinion existed in the States as to the respective merits of the St. Gaudens and Barnard statues.' The Commissioner felt that he had nothing to do with the choice; that concerned only the donors. The face of the Barnard statue was modelled from a mask taken of Lincoln's face during his lifetime."

Lord Weardale's explanation of the case is as follows: "When it was decided by our committee to set up in public positions in London statues of Washington and Lincoln, a fine replica of a statue of the former for this purpose was presented by the State of Virginia to the British Government, and it was further proposed by our American friends that a statue of Lincoln should be similarly presented, and a replica of the statue by Augustus St. Gaudens was suggested as suitable. Time passed, however, and this suggestion never materialised, and eventually Mr. Charles P. Taft, brother of President Taft, made to the committee the generous offer of a replica of Barnard's statue, which the committe gratefully accepted.

"The statue by Barnard was erected by public subscription in the City of Cincinnati, and is considered, we understood, by millions of Americans as a most faithful presentment of Lincoln as he really was.

"We should, of course, cordially appreciate the donation of more than one statue of Lincoln, and worthy sites would readily be found for them. It rests, therefore, with the supporters of the present movement in America to decide which statue they prefer for erection upon the particular site already granted by H.M. Government at Westminster, and, when they have arrived at a definite conclusion, generously to present a replica of the one chosen in preference to the Barnard statue, which, however, would certainly be placed in some prominent position, where I am sure it would be much appreciated by the countless admirers of Lincoln as a popular hero."

As we have said in our editorial note, the name and fame of Abraham Lincoln are highly venerated in this country, and there can be no doubt that replicas of both statues would be warmly welcomed here. That, we trust, will be the issue of a controversy in which, naturally, we in Britain desire to maintain an undeviating attitude of "benevolent neutrality."

GERMAN ARROGANCE IN FRANCE.

BY T. J. MATHER.

THESE two monuments, situated, one in the town and the other in the outskirts of Bapaume—in the Place Faidherbe and the town cemetery respectively—are at this moment a fair commentary on the German mind and character.

Bapaume, not only in this war, but also in the recurring wars of history, appears to have been one of the "cockpits" of France; many battles were fought here. In 1870 the French met and checked the German forces in this neighbourhood, and a few years later the Bapaumois erected a bronze statue to their general—Faidherbe.

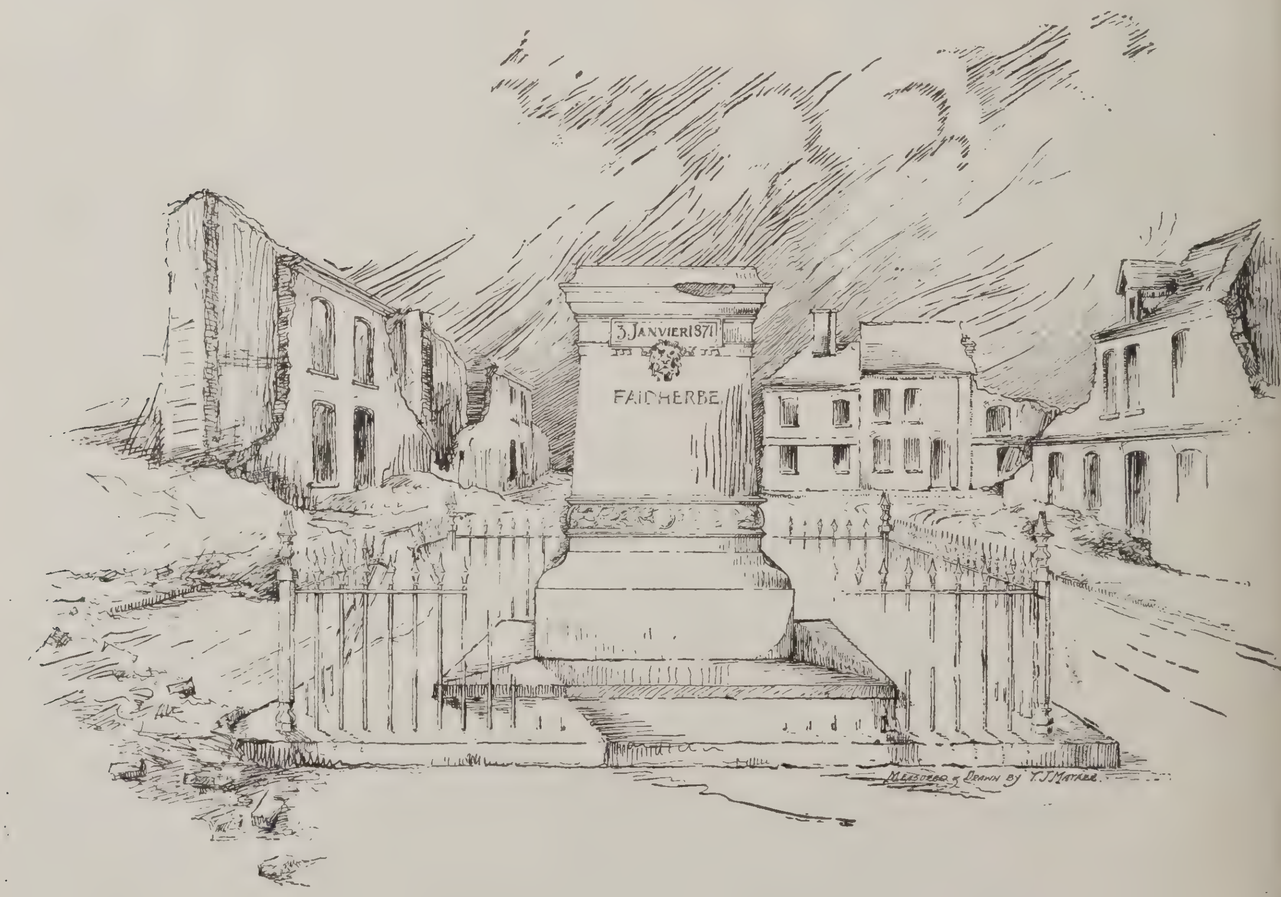
In 1915 the Germans, in their "metal-hunger," removed the statue from its base for deportation, and, no doubt, conversion into shell nose-caps or other munitions of war, and it is the despoiled pedestal which is shown in this sketch. It is typically German that whilst they have robbed the French memorial they have the effrontery to erect one of their own in a cemetery in the occupied area (not over an actual tomb, be it remembered, for they have already put crosses over their dead, buried near by).

They possibly expected this monument to be immune from harm; or is it that at the back of their minds was the belief that they could make their conquest permanent? It looks very much as if this latter was the case, for the memorial is well designed and solidly built, and the carving and gilded lettering is of admirable execution. Herren Erdmann and Kloeck, "Architect and Maurermeister" respectively, have not hidden their lights under a bushel, for their names are also carved on the base of the memorial.

The following is a free translation of the inscr
tion :—

We bow our heads
  Before our dead,
Who, fearless and true,
  Sacrificed their lives.
Their mortal remains
  We have laid here to rest,
Their souls, freed,
  Have gone home.
This memorial is erected
  In grateful memory to
Our comrades fallen in
  The neighbourhood of Bapaume.
    Memorial of the XIXth Reserve Corps

[The drawings reproduced with this note are pu
lished with the permission of the Press Bureau. Th
were made a few weeks ago by our correspondent, w
is serving with the forces in France. The conduct
the Germans in invaded territory has been uniforn
infamous. The despoiling of the fine monument
General Faidherbe is quite in accordance with t
policy of destruction which authorises the bombar
ment of cathedrals and the chopping down of fr
trees. The Germans are building up a record
barbarity which will be remembered to the end of tin
Louvain, Ypres, Rheims, Verdun, Arras, St. Quentin
these and scores of other places prove that t
Germans have no vestige of a claim to an honoural
place in civilised society.]



MEMORIAL TO GENERAL FAIDHERBE, BAPAUME, DESPOILED BY THE GERMANS.
DRAWN BY T. J. MATHER.

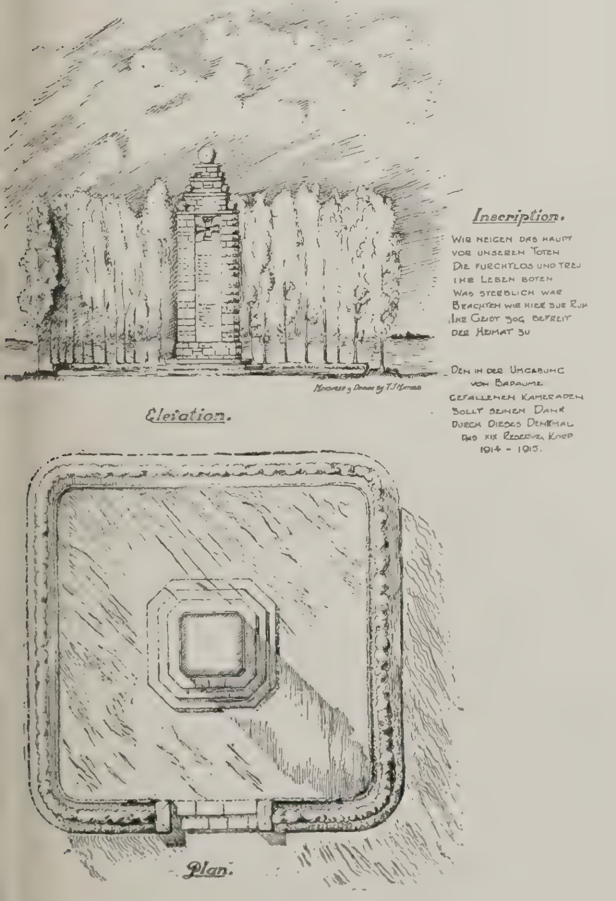
IANCHESTER'S PROPOSED PEACE MEMORIAL.

R THOMAS BEECHAM'S generous offer to build an opera-house in Manchester if the Corporation will provide the site has suggested nfinitely more dignified use of the infirmary site that of occupying it with a public slaughter- se; but Councillor Todd, chairman of the Art ery Committee of the City Council, whilst in pathy with the general idea of an opera house, ngly believes that the infirmary site should be oted to something wider in its public usefulness. urally his scheme would include an art gallery ly adequate to the needs of Manchester, but (says interviewer of the "Manchester City News") he oo broad in his views to begin and end with that. Todd contemplates an ambitious but perfectly sible project for the creation of a noble peace norial on the Piccadilly site, a memorial which ld link together art, literature, music, and the na, and hallow them all with the recollection of the of Lancashire regiments whose sacrifices have ed forward the peace in which these higher things flourish. A public subscription is suggested.

THE PLATES.

Design for a Shipping Company's Offices.

HE design of shipping offices is a subject which must make intimate appeal to students of a school of architecture situated in a great seaport city. ng on the spot, they can ascertain the conditions requirements at first hand, which is a considerable antage. Hence, Mr. A. C. Holliday's drawings, roduced in this issue, will be studied with more than inary interest. It will be seen that, so far as the external elevations are concerned, Mr. Holliday relies for his effects upon a somewhat flat pilaster treatment; which, however, is deep enough to produce the necessary strength of contrast in light and shade. In the matter of proportion, the vertical dimension is, perhaps, a little over-emphasised; but the design, on the whole, is one of considerable architectural merit. A note on the Annual Exhibition of the Liverpool School appeared in our last issue.



IEMORIAL ERECTED BY THE GERMANS IN BAPAUME.
DRAWN BY T. J. MATHER.

Ceiling from Harewood House, Hanover Square.

On the east side of Harewood Place, and fronting southwards on Hanover Square, there stood until recent years a fine house on which were writ large the dignity and stateliness of the eighteenth century. It was latterly the town house of the Earl of Harewood. but the original building pertained to the Dukes of Roxburghe, and under the third Duke it assumed its later form, when it was refashioned by Robert Adam. The Brothers Adam carried the refinement of detail and simplicity of form in architectural design much farther than it had gone before their arrival; but at the same time they supplied the foil. They introduced a type of ornament obtained solely from classical sources, an ornament capable of almost mechanical precision and of a very high degree of finish. Their decoration was contained in geometric lines; it was controlled, and never dominated or interfered with the structural form. It pleased the classical taste of the late eighteenth century; it suited the delicate poise of intellectual thought which was a characteristic of the day; it was little more than a texture added to the building, but it was like a parchment written over with characters and adorned with pictorial vignettes illustrating and recalling the life of antiquity which the architecture itself was designed to reflect. Moreover, the decorative motifs could be applied either lavishly, as in Adams' own work, or sparingly, without disadvantage. A single medallion, with its swag of husks, or chaplets, or a cobweb fanlight over the door, was sufficient to introduce the atmosphere which we can so quickly recognise. The constancy of the style, its inherent faithfulness to its own unwritten laws, became its strength, and its influence was immediately felt throughout the country. The Brothers had interpreted a phase of national life, and had added a delicate charm to the work of a period that threatened to become arid and lifeless. The ceiling from Harewood House, reproduced in this issue, is a typical example of their work.

Architectural Ideas in War-time.

This is another design by an architect on war service—somewhat more ornate and elaborate, perhaps, than those which have already appeared. Further examples will be published in succeeding issues. In the meantime we again extend a general invitation to our readers to submit designs for publication in this series. All drawings will receive careful consideration.

Details of Blenheim Palace.

Blenheim Palace has been dealt with rather unmercifully by its critics, many of whom have been totally unable to see beyond the obvious heaviness of its general aspect. This demerit, however, is atoned for to a considerable extent in the detail, much of which is of a highly attractive character—for example, the consoles to the cornice, shown in the upper illustration on the "Monumental Architecture" plate in this issue. The contours of the mouldings are of great variety, and are full of architectural interest. Our reproductions are made from "The Liverpool Architectural Sketch Book."

End Pavilion of the Ministry of Marine, Paris.

Gabriel's great buildings on the Place de la Concorde are described in the article which appears on page 146.

NEWS ITEMS.

Denbigh's New Town Hall.

The new market and town-hall erected by the Corporation of Denbigh at a cost of about £10,000 has been formally opened. It will seat about 2,000 people.

Cement for West Africa.

Many private concerns in Portuguese West Africa use large quantities of cement. This is one of the chief building materials employed in the Portuguese colonies. Cement was formerly imported from Germany and Belgium, but no satisfactory substitutes have yet been found. Orders for this material are usually in 1,000-barrel lots.

Housing Problem at Wolverhampton.

The Wolverhampton Trades Council have instructed their members on the Town Council to propose a resolution urging a conference on the subject of housing in the borough. The Secretary (Mr. H. Bagley), at the last meeting of the Council, said at least 2,000 houses were required, and that there were between 200 and 300 houses in the borough in which two families were living.

Enlargement of Halstead Cottage Hospital.

Alterations and additions to Halstead Cottage Hospital have been carried out from plans prepared by Mr. W. Cressall (Goodey and Cressall, architects), Colchester, at a cost of about £1,500. The premises have been considerably enlarged, a new private ward has been added, the drainage has been entirely reorganised, and the general equipment of the institution has been brought up to date in every respect.

Waterproofing Pits at a Pumping Station.

Some pits, which were situated 20 ft. below the water level at the pumping statiton of Bedford Sewage Works, have been successfully waterproofed with a 3 and 1 mixture of cement, rendered to a total thickness of 1 inch. The cement was applied in three coats, each coat being about a bare half-inch thick; five pounds of Pudlo were added to each 100 lb. of cement. Good results are reported from this treatment.

Reinforced-Concrete Ships.

The committee of Lloyd's Register of Shipping have approved plans for a number of non-propelling barges, some of them to carry 500 tons deadweight, and also of a motor-vessel, to be built of reinforced concrete, for the British and Scandinavian coastal trades. These vessels will be built under the inspection of the society's surveyors with a view to classification in Lloyd's Register Book. Plans of other reinforced-concrete vessels of larger carrying capacity for certain sea trades are under consideration.

Reparations at St. Paul's.

It is stated that the authorities of St. Paul's Cathedral have recently discovered documents which disclose the fact that as far back as the eighteenth century the safety of the building had been a serious proposition. During the work of restoration it was found necessary to close the edifice entirely for nearly two years. Fortunately, to-day, the work of repair is being accomplished without materially affecting the services. By slow stages the foundations of the south-west pier have been consolidated and the work so far completed that the scaffolding in this part of the building has been removed. The workmen are already placing hoardings in part of the south transept, in order that the work on the south-east pier may be started at an early date. Before work for the consolidation of this pier is started, however, it will be necessary to remove the three statues at its base, and this is a delicate task requiring most expert and careful handling of statues that hardly deserve it.

£90,000 Housing Scheme for Stockton.

It was reported to the Stockton Rural District Council last week that, owing to industrial developments on the banks of the Tees at least a thousand new houses will have to be built on the north bank after the war. The scheme of the North-East Coast Steel Corporation to erect new steelworks and blast furnaces, and to construct another large shipyard, will make it necessary for over 300 houses to be built in the parish of Billingham, and the Council decided that if the houses are not built by private enterprise they will avail themselves of the financial assistance offered by the Local Government Board and build the houses themselves at an estimated cost of £90,000.

Associated Portland Cement Manufacturers' Report.

The report of this company for the year ended June 30 last makes quite a favourable showing, for, notwithstanding the adverse conditions to which it is still subject, a moderate increase in profit is disclosed. The sum of £87,893 having been deducted for repairs and renewals, against £70,467 a year ago, the profit amounted to £372,187, as compared with £355,768. After providing for depreciation, etc., the directors set aside £50,000 to reserve, or the same as a year ago, but they state that it is still impossible to recommend payment of any portion of the arrears of Preference dividend in view of the uncertainties of the future. As regards the company's home operations, there has been a further increase in the cost of production, and the increase in profits is attributed largely to the initial return from the South African works in which the company is interested. This is regarded as very satisfactory, and the outlook for this undertaking, it is stated, is good, but there is no real improvement to report with regard to the large investments in British Columbia and Mexico.

Yorkshire Federation of Master Builders.

The Sheriff (Mr. A. J. Atkinson) and the Under-Sheriff (Mr. Wilfred Barton), of Hull, gave a welcome to the members of the Yorkshire Federation of Building Trade Employers, which met at the Builders' Exchange, Hull. The Sheriff spoke of the progress of the port, and went on to say that wherever there was trade buildings were necessary, and the better trade was, so much more were their energies and abilities required. We had had three years of war, and we were looking forward to the time when hostilities having ceased, a policy of reconstruction would be entered upon. In that reconstruction the builders would play an important part, and, as in other trades, they would be dependent for success upon loyal co-operation between capital and labour. His Worship said he was given to understand that there were many important schemes waiting to be launched a
immediately the war was over
Under-Sheriff also spoke, and, c
motion of Mr. Quibell, seconded
Wilkinson, a vote of thanks was ac
to the civic representatives.

Bath and Portland Stone Firms, Half-Yearly Report.

The following report of the direc
this company has been issued:
directors herewith submit to the
holders their fifty-ninth half-year
port and their statement of the com
accounts for the half-year ending J
last, as audited by the company's au
Messrs. T. P. McNaught and Co.,
tered accountants, of London. Aft
payment of interest on the deb
stock and providing for the remune
of the directors and auditors, the ac
for the half-year show a loss of
16s. 9d.; the balance of loss broug
ward from the last account was
15s. 8d., leaving a debit balance on
and loss to be carried forward of
12s. 5d. Your directors regret there
possibility of any improvement in th
fit and loss account until the war is
and there is no opening for the er
ment of Bath and Portland stone s
as the Government building restri
remain in force. In the meantim
standing charges and expenses have
cut down as far as this can safely be
consistent with the maintenance c
company's quarries, properties, and
nisation, ready to take full advanta
the re-opening of the building sto
dustry when normal conditions
after the war. The amount charg
profit and loss account for the hal
for reserve against depreciation is
12s. 11d., increasing the total amo
£158.502 1s. 11d., and the plant
machinery have been fully maintain

The Theosophical Hall Command

A strong protest has been sent t
Ian Macpherson, the Under-Secreta
State for War, by the building
operatives engaged in the erection
Theosophical headquarters, Tav
Square, against the proposal of the
Office to acquire the premises.
meeting of the skilled and unskilled
men held on September 23, the foll
resolution was passed: "We p
against the action of the War Off
commandeering these premises, and
doing wrecking the experiment in
labour and workshop managemen
which we are engaged. We are str
of the opinion that premises suitabl
War Office needs could have been
in Piccadilly and Pall Mall by makin
of the huge clubs situated there, and
mainly by the well-to-do civilians, wh
in possession of good homes. We
urge the London Building Indu
Federation, in the event of the pre
being taken over, to request the
Office and the Theosophical Socie
come to an agreement by which the
ing should be purchased by the Go
ment in order that on a new site,
under more favourable conditions aft
war is over, our experiment may be
a chance of being completely carried
The contract for the Theosophical
was given out during the building
which took place in London before the
break of the war. Direct labour was
ployed in its construction, the experi
being the first of the kind adopted
large scale in the metropolis.

WAR·BVILDINGS·SECTION.

COAL WASHERY BUILDING AND STORAGE BUNKER AT GLASSHOUGHTON, YORKSHIRE.

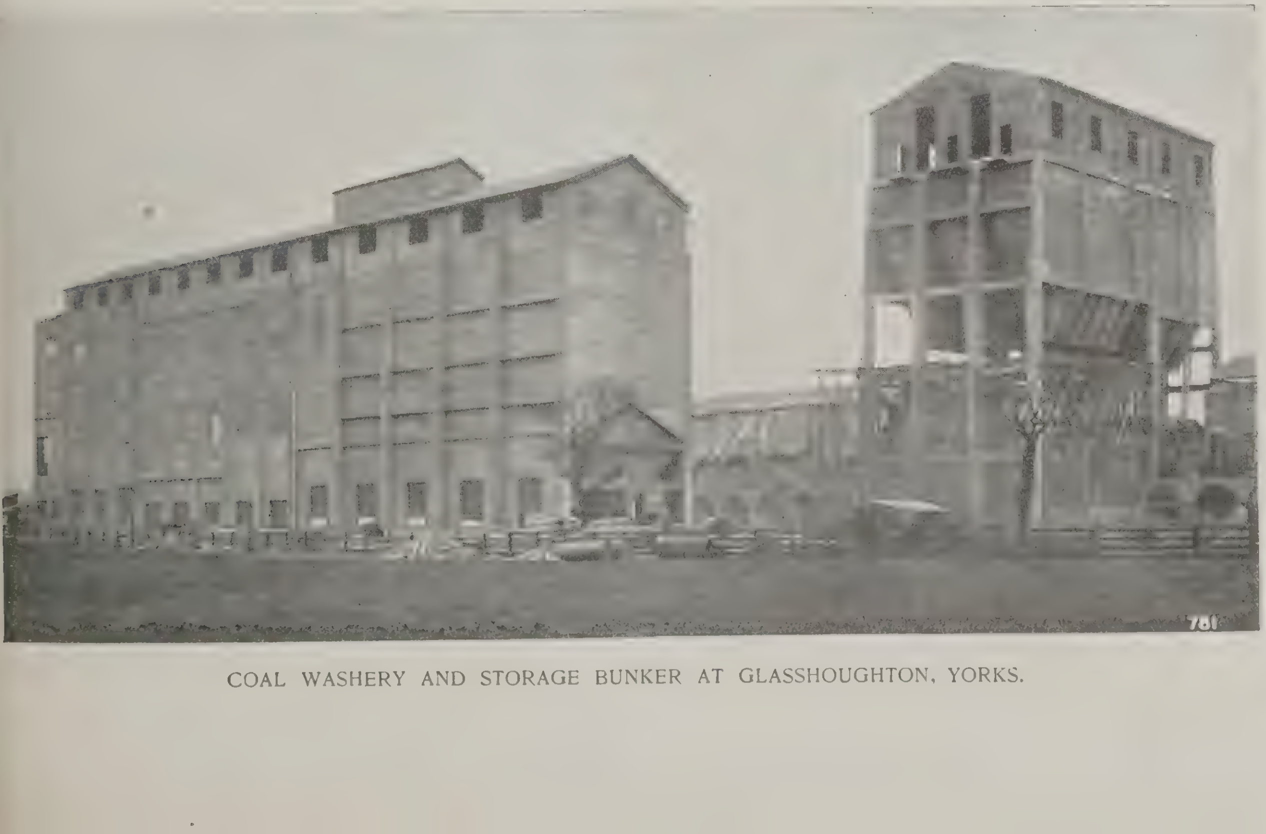
IE progressive spirit of Yorkshire enterprise is well exemplified in the mpanying illustrations, showing a re- rced concrete coal washery building a large coal storage bunker. These ctures are part of an extensive coal- ning, coke oven, and by-product plant, h has been erected at Glasshoughton the Yorkshire Coking and Chemical Ltd.

he main plan of the washery building sures 186 ft. in length by 34 ft. in h; the height from the ground floor he eaves is 65 ft. In addition to the n building there is a shale hopper at one end of 60 tons capacity, and on one side there is an elevator pit from which the coal is raised to the washery.

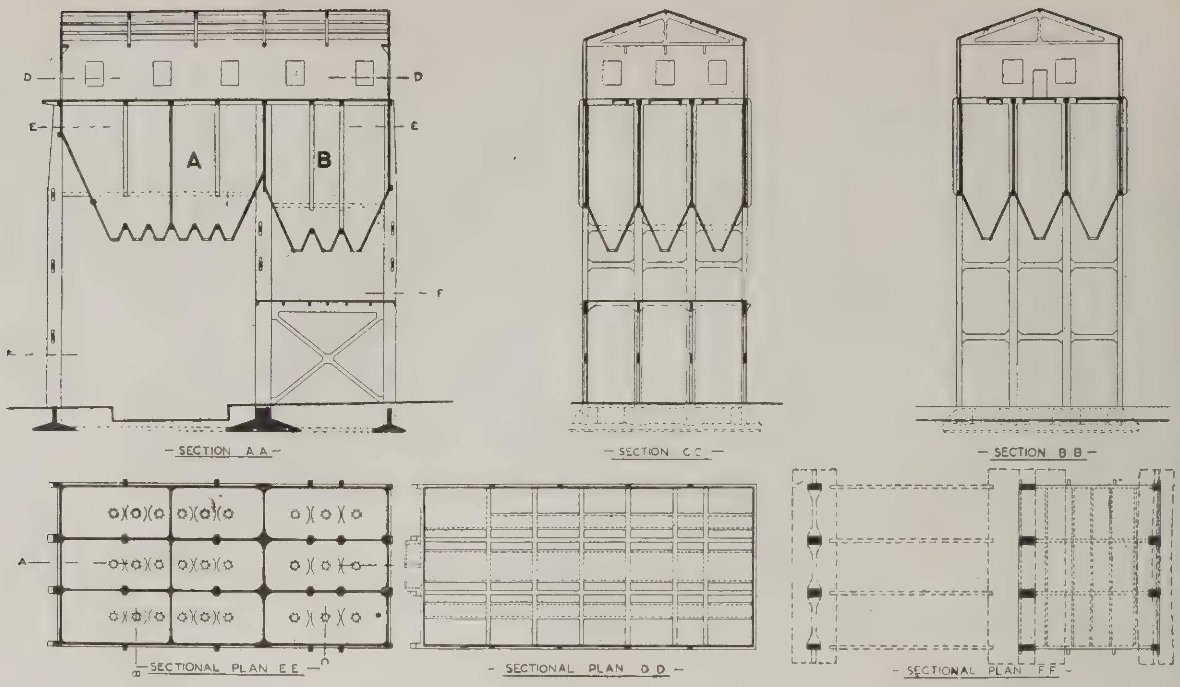
The floor in the ground is lightly reinforced with a mesh of bars, and there are two pits lined with reinforced concrete, one containing pump foundations and the other serving as a water-tank into which the channels discharge the outlet water from the suspended water tanks.

Above the ground level there are three upper floors carried on beams which span, in the lower two, from the wall to an intermediate row of columns, and in the top floor, from wall to wall without centre support. Between the floors, also, the drawing shows various intermediate stages, and beams which carry the machinery for separating and distributing the coal to the various parts of the washery.

The lower storey contains the suspended water tanks referred to above, and the dredger sump, an elevator from which carries the coal to the main washed coal bunkers. These latter occupy, for a height of three floors, more than a third of the length of the washery, consisting of eight compartments with a total capacity of 1,500 tons. Two smaller bunkers adjoin them, being two storeys in height with



COAL WASHERY AND STORAGE BUNKER AT GLASSHOUGHTON, YORKS.



COAL STORAGE BUNKER AT GLASSHOUGHTON, YORKS: PLANS AND SECTIONS.

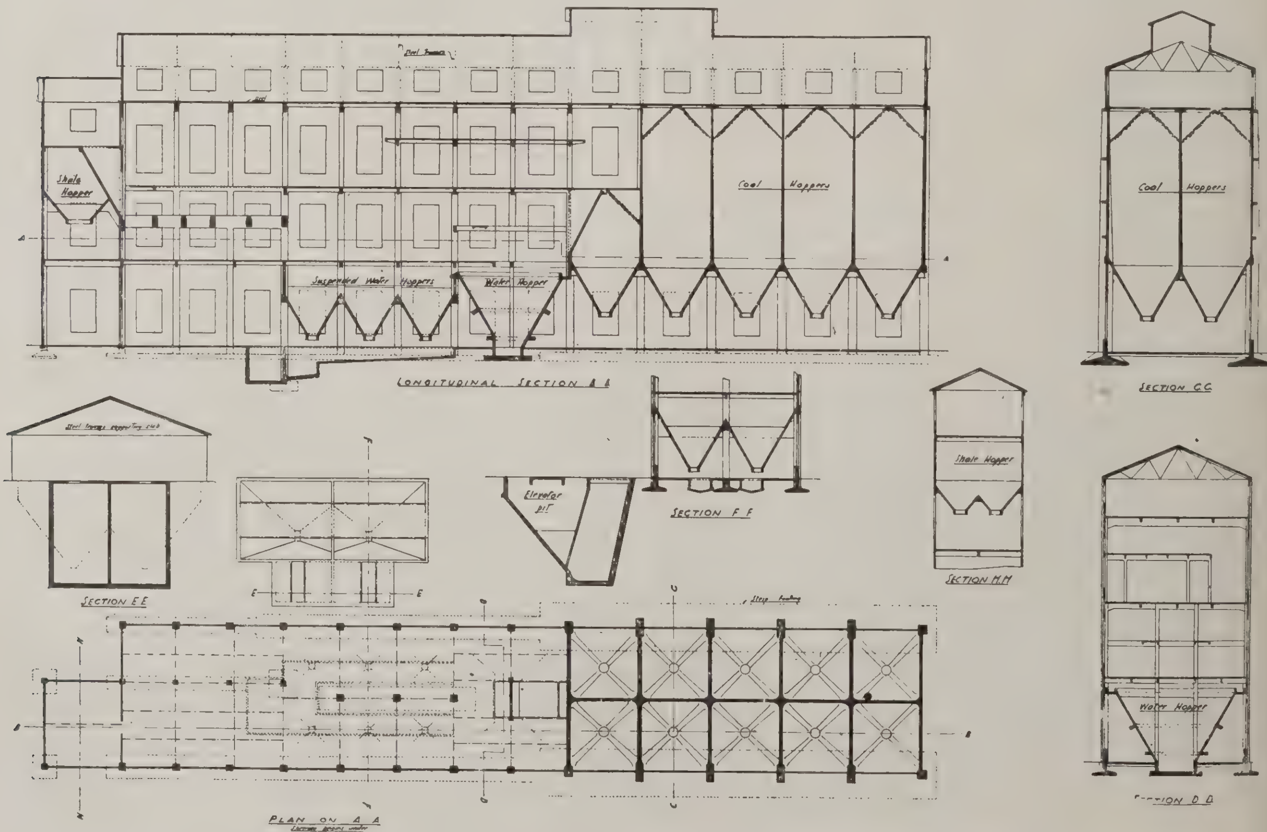
a total capacity of 180 tons. The roof of these bunkers is composed of trusses with purlins carrying a 2½-in. reinforced concrete slab. The external walls, which form panels between the columns, are 4 in. in thickness, though, of course, they are thickened out where they form the walls of bunkers or tanks; and, in the case of the main bunkers, they are strengthened by the insertion of horizontal beams.

From the sections shown and the foregoing description it will be understood that, although the exterior of this washery is plain enough, the interior is of a most complicated nature. In fact, the building might well be taken as an example of the many diverse uses to which reinforced concrete can be adapted, comprising as it does foundations, columns, beams, floors, walls, roofs, water tanks, eighteen storage hoppers, elevator pits, and other small items too numerous to mention.

The coal storage bunkers that have just been completed have a total capacity of 1,880 tons of small washed coal, and are constructed entirely in reinforced concrete. The total length is about 87 ft. over columns, the total width is about 4 over columns, the height from the un side of the strip footing to the ridge of superstructure is about 105 ft.

A point of interest is the footings to columns. These have been designe distribute the load over a large area the use of inverted tee beams known "strip footings," the largest of which a tee 19 ft. wide, and a beam 6 ft. d by 4 ft. wide.

The columns which have been desig to carry the dead and live loads and to resist wind pressure, vary in size f



COAL WASHERY BUILDING AT GLASSHOUGHTON, YORKS: PLANS AND SECTIONS.

.. by 15 in. to 18 in. by 24 in., and
raced together diagonally by 12 by
, or horizontally by 16 by 8 members.
tform has been constructed under the
er to carry trucks charged with coal
the hopper mouths.

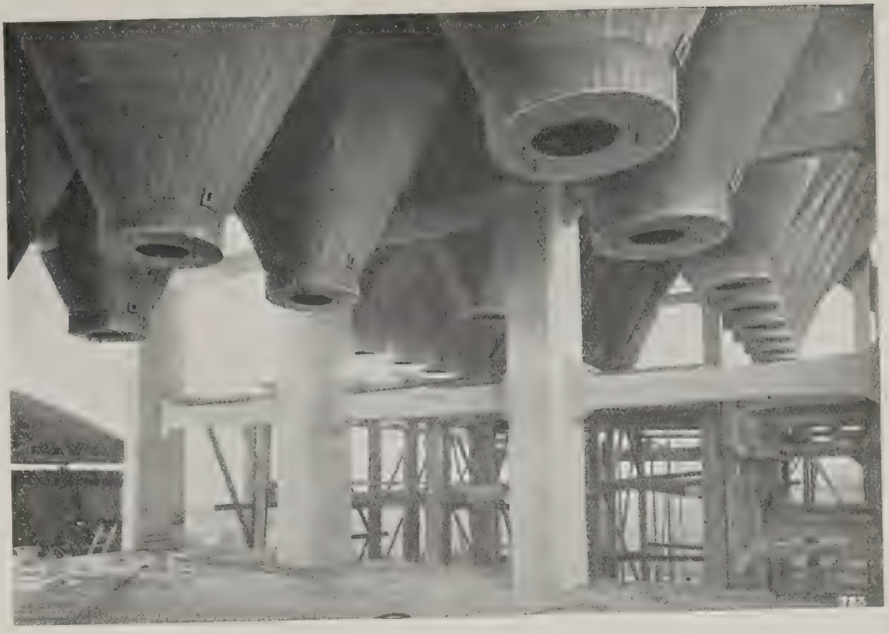
e hopper bottoms, 5 in. thick, are of
al form, being circular in plan;
although this form is more difficult
nstruct it is economical under certain
itions and is recommended by its very
strength.

e bunker walls generally are designed
t as beams in addition to the hori-
l pressure which they have to resist.
widest span of these beam walls is
t 51 ft., and their thicknesses vary
5½ in. to 7½ in. They are stiffened
ertical beams, which are also designed
ke the horizontal pressure.

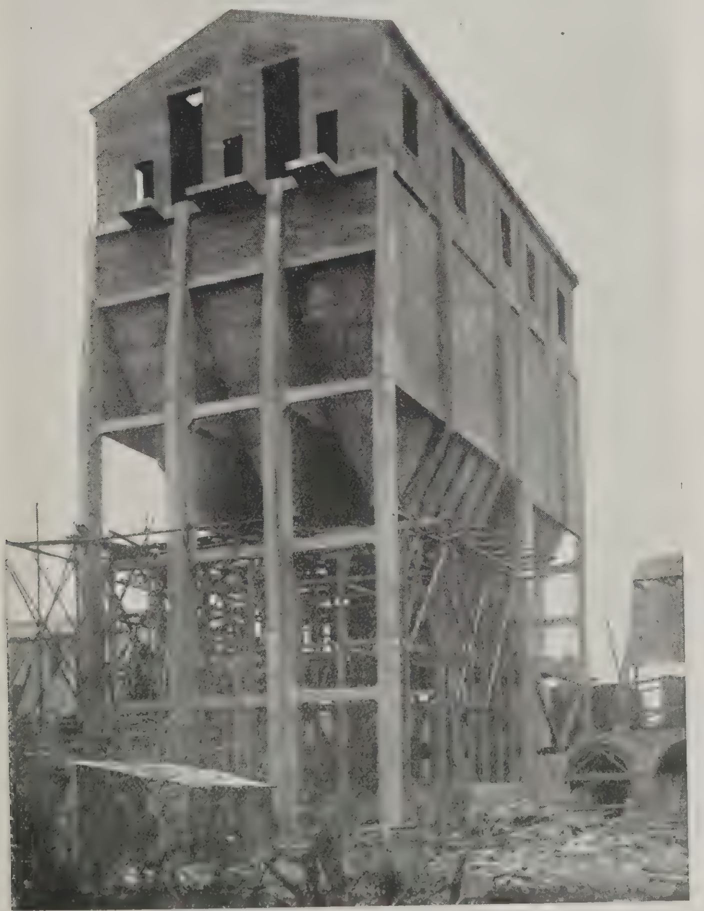
ere is a platform above the bunkers,
eams of which have been designed to
the elevator and the conveyors in
tion to the motors by which they are
n.

e superstructure walls are 4 in. thick,
ared to take wrought-iron window
es. These walls are stiffened by
mns, which are designed to carry the
principals. The latter are about
t. span and 16 ft. centre to centre.
se principals, in addition to carrying
covering, are designed to carry the
ting. The roof slab is 3 in. thick,
orted on purlins.

he engineers for the whole of the plant
The Koppers Coke Oven and Bye-
duct Co., of Sheffield. The con-
tors were Messrs. J. W. and G.
den, of Bertram Road, Bradford. All the reinforced concrete work in the buildings is reinforced with indented steel bars supplied by the Indented Bar and Concrete Engineering Co., Ltd., of Westminster, to whose courtesy we are indebted for the accompanying illustrations of work that is of special interest in war-time.



COAL STORAGE BUNKER AT GLASSHOUGHTON, YORKS: VIEW OF HOPPER MOUTHS.



COAL STORAGE BUNKER AT GLASSHOUGHTON, YORKS.

GOVERNMENT HOUSING AT CATHAYS PARK.

An important communication from H.M. Office of Works was read to the Cardiff Property Committee, when Mr. A. C. Kirk presided. It removes the impression that may have been formed that the Government had abandoned the decision to erect State buildings in Cathays Park, and revives the idea of developing the park as the site for Government buildings under any future scheme of decentralisation and devolution.

The letter states it would, in any case, have been impossible to complete the erection of the building by January 1, 1918, as suggested by the Corporation in their letter of January 19 last. "In all the circumstances of the case the Board of Works have thought it best to obtain the sanction of the Lords Commissioners of H.M. Treasury to amend the agreement between the Board and the Corporation of Cardiff so that it shall provide for the commencement of the building within a period not exceeding two years after the declaration of peace. It is thought that if your Council could see their way to accept this modification their main point would be gained, in so far as the Government would be definitely pledged to commence the building within a comparatively short period after the war. The Government, on their side, may reasonably require some period after the declaration of peace in which to determine what changes in the building are requisite to meet the new conditions."

The committee considered the application a reasonable one, and agreed to the suggested amendment of the agreement.

The building referred to will, it is understood, be primarily in the nature of offices for the Welsh National Insurance Commissioners, and has been planned to the north of the Technical College in such a way as to allow of extensions across the northern portion of Cathays Park when other Government Departments are centralised at Cardiff.

GOVERNMENT SCHEME FOR 200,000 WORKERS' HOUSES.

Mr. Hayes Fisher, President of the Local Government Board, presided at a further private conference arising out of the national housing problem at the Local Government Board offices, Whitehall, last week.

Important developments may be expected in regard to the scheme now being considered, and it is probable that over 200,000 subsidised workmen's cottages will be erected in different parts of the country.

They will be of cheap but artistic type, and it is expected that no tenant who does not come under the National Insurance scheme will be allowed to occupy them, the object of the Government being that they should be reserved exclusively for the bona-fide labourer.

Special attention will be given to the needs of the rural districts, and building operations will begin with demobilisation.

The scheme will provide labour for thousands of men on their discharge from the Army, and local bodies have been requested to forward details of the number of new houses which are required.

It is expected that by October 15 the Local Government Board will be in a position to make a definite announcement.

OBITUARY.

Second-Lieutenant A. G. Beville.

We publish below, by courtesy of the Editor of the R.I.B.A. Journal, a portrait of Second-Lieutenant Alfred Geoffrey Beville, who was killed in action on Easter Sunday of this year. Lieutenant Beville, who was a probationer of the R.I.B.A., was only twenty years of age. He held his commission in the Queen's Westminster Rifles, a regiment which has distinguished itself on many occasions during the present war. Lieutenant Beville was the son of Mr. A. W. Beville, manager of Messrs. Hampton and Sons.

Mr. Edward Garratt, Licentiate R.I.B.A.

The death has been notified from wounds received in action of Mr. Edward Garratt, a member of the firm of Garratt and Simister, and one of Birmingham's most prominent young architects. Born in 1880, Mr. Garratt was educated at Wednesbury and Walsall, and articled to Messrs. Hickton and Turner, of the latter town. As the best student for three successive years at Walsall School of Art, he was awarded a prize given by the Earl of Bradford; going later to Birmingham, he worked in the office of Mr. Essex, and whilst there carried off the Pugin studentship of the Royal Institute of British Architects and the Birmingham Architectural Association Travelling Studentship. Subsequently he was employed by Mr. Batsford, the architectural publisher, making illustrations for a monumental work upon the Tudor period by Messrs. Garner and Stratton. Mr. Garratt afterwards joined Mr. Simister in partnership, and the firm gradually came into eminence, winning several open competitions, amongst them being the competitions for the Stoke Town Hall, buildings at Exeter, and the Coventry Council House. When he met his death Mr. Garratt was serving at the front with the Royal Garrison Artillery.

R.I.B.A.

The following items are taken from the current issue of the R.I.B.A. Journal:—

THE R.I.B.A. RECORD OF HONOUR: FORTY-SEVENTH LIST.

Fallen in the War.

Flower, Lieut.-Colonel Victor Augustine, D.S.O., London Regiment (Licentiate). Killed in action on August 5.

Houston, Second-Lieutenant William Wylie, Royal Engineers (Associate, 1913). Killed in action in France on August 17.

Meikleham, Lance-Corporal David Lang, Royal Engineers (Associate, 1912). Killed in action.

Wilson, Second-Lieutenant John Hardy, Sherwood Foresters (Licentiate). Killed in action in France on April 7. Aged thirty-three.

Wray, Second-Lieutenant Ernest Warneford, Royal Enginers (R.I.B.A. Measured Drawings Medallist, 1909). Killed in action on August 23.

O'Brien, Edward, R.A.M.C. (Licentiate). Died on service.

Members' Sons.

Silcock, Second-Lieutenant Percy Bryan, Cheshire Regiment. Died of wounds received in action in France on August 11. Son of Mr. S. P. Silcock (F.), of Warrington.

Tubbs, Captain Seymour Burnell, Gloucester Regiment. Killed in action on August 22. Second son of Mr. Percy B. Tubbs (F.).

Military Honours.

Rosenthal, Brigadier-General Charles (Associate, 1904), of Sydney, N.S.W., who joined the Australian Imperial Force in August, 1914, has been three times wounded and three times mentioned in despatches, and has been awarded C.B. and C.M.G.

Ridley, Captain Basil White, South Lancs Regiment (Associate, 1917): awarded the Military Cross "for conspicuous gallantry and devotion to duty in carrying out daring reconnaissances during an attack. He obtained and sent back valuable information at a time when communication was exceedingly difficult, and he showed exceptional coolness and initiative under fire."

Leith, Lieutenant Gordon, R.F.A. (Associate): awarded the Military Cross.

THE LATE 2ND LIEUT. A. G. BEVILLE.

Triscott, Second-Lieutenant Ha
Stephens, R.E. (Associate), has b
awarded a bar to the Military Cross c
ferred upon him in June last.
"Gazette" says: "In spite of incess
enemy sniping at close range, he
posed himself fearlessly in reorganis
one of his parties that had suffe
severely by shell fire, thus complet
the task of wiring in front of our ne
established advanced posts. He se
splendid example of determination
devotion to duty.

Serving with the Forces.

Intimation has been received that
following members are serving, bring
the total to 76 Fellows, 526 Associates,
Licentiates, and 297 Students.

ASSOCIATES.

Edwards, S. J. (of Singapore): Seco
Lieutenant, I.A.R.O., Royal Enginee
Wickenden, Arthur F.: R.N.A.S.
Ramsey, Stanley C.: Lieut., R.N.V.R.

LICENTIATES.

Madgin, A. J.: Second-Lieutenant, A.S.
Lewis, P. S.: Royal Engineers.
Lead, E. A.: R.N.A.S.
Payne, E. H.: R.F.C.
Warde, W. J.: R.N.A.S.
Exley-Fisher, Thomas: Second-Li
tenant, Durham Light Infantry.

Promotions.

Hitch, J. O. B. (A.), Artists' Rifles,
Second-Lieutenant, London Regimen
Wright, Osborn (Licentiate), to Secon
Lieutenant, A.S.C.
Grote, Lieut. A. L. (Licentiate), to Cap
Inland Water Transport, R.E.

Housing of the Working Classes.

An important proposal has been ma
to the Institute by the Local Governme
Board in connection with the scheme
the housing of the working classes. Th
involves the grant of a sum of money
the purpose of obtaining, under the dire
tion of the R.I.B.A., the best plans
working-class houses, and a committee
now considering the details of the pr
posal, in the carrying out of which it
hoped to secure the co-operation of t
Allied Societies.

The Proposed National War Museum

The following letter has been address
from the Institute to the Prime Ministe

September 14, 1917.

Sir,—The Council of the Royal Institu
of British Architects has noted th
announcements in the Press respecting th
proposed National War Museum, a pr
ject which, as outlined, promises to be th
most important ever undertaken in th
country, and one which should comman
the highest architectural qualities
which the Empire is capable.

The Council is deeply impressed wit
the great importance of the work and th
opportunities whch it will afford for
national and Imperial monument worth
of the events which it will commemorate
and wishes, therefore, respectfully
suggest that when the time comes for co
sidering the means by which a suitabl
design may be secured it may be decide
that the most desirable procedure will b
by a public competition amongst the arch
tects of the whole Empire.

The Council of the Royal Institute
British Architects would be prepared
co-operate and assist in the organisatio
of such a competition if called upon to d

(*Continued on page xi.*)

(*Continued from page* 154.)

and would be pleased to send a depu-
on to lay before you its views if
ight desirable.—We are, Sir, your
t obedient servants.

HENRY T. HARE, President.
E. GUY DAWBER, Hon. Secretary.

e *R.I.B.A. Galleries Requisitioned.*

he Army Council have requisitioned
Galleries, known as the Maddox
et Galleries, forming part of the Insti-
premises and situated at the rear of
9, Conduit Street. The Galleries are
uired as temporary quarters for the
ss staff of the Canadian Forestry
ps, which is closely connected with the
ne-Grown Timber Department of the
rd of Trade. The Civic Survey, which
had the use of the Galleries during
past two years, are now accommodated
he Common Room.

ouncil Appointments to Standing Committees.

he following appointments to the
nding Committees have been made by
Council under By-law 51:
rt.—Messrs. J. J. Joass, Harry Red-
, John W. Simpson, Harry Sirr,
lter Tapper.
iterature.—Sir John Burnet, R.S.A.,
.D., Messrs. J. D. Crace, H. M.
tcher, H. G. Ibberson, Brook Kitchin.
ractice.—Messrs. F. A. Powell, Her-
t A. Satchell, H. A. Saul, W. Henry
ite, William Woodward.
cience.—Messrs. H. W. Burrows, C. A.
ubney, Bernard Dicksee, J. E. Franck,
Jacques.

Cambridge Universitv School of Architecture.

rofessor Edward S. Prior (F.), in the
issue of the "Journal," called atten-
to the facilities for research in build-
science which are being provided by
mbridge University in connection with
architectural school. Advanced
dents are recommended to take advan-
e of the arrangements the University
making for the equipment of research
experiment in (1) the materials, (2)
processes, and (3) the administrations
buildings. Professor Prior will be
ased to give information to anyone who
y wish to treat such questions experi-
ntally in the interests of British art and
nce.

Australia and Town Planning.

rrangements have been made for an
stralian Town Planning Conference
exhibition to be held in Adelaide
ing October. Questions of national in-
est affecting town planning will be dis-
sed having particular reference to
stralia and civic art, the future of Aus-
lian cities, and the Federal capital;
ilst as regards the New South Wales
tion, papers will be read treating of the
blems of Greater Sydney and New
uth Wales, in relation to municipal
n planning control and administration,
transit problems of Greater Sydney,
the principles of civic design applied
Greater Sydney.

Sydney, N.S.W., Open Spaces.

Mr. John Sulman (F.) has been success-
in his public-spirited opposition to the
ent proposal of the New South Wales
vernment to encroach upon the
omain" for the erection of an exten-
n of Sydney Hospital. The Domain is
largest open space in the centre of
dney, and, as Mr. Sulman has pointed
t, there are several alternative sites available for the needs of the hospital. It is satisfactory to note that the Premier, Mr. W. A. Holman, and his Government have now undertaken that no further encroachments upon this public open space will be permitted. Both Mr. Sulman and the New South Wales Government are to be congratulated on this result.

The Examinations: Licentiates and the Fellowship.

The following Licentiates have passed the examinations qualifying for candidature as Fellows:

Harvey, William Alexander, Birmingham.
Jones, Francis, Manchester.
Jones, Gerald E., Auckland, N.Z.
Morrish, William James Marmaduke, Gillingham, Dorset.
Powell, Robert Sidney, Regent's Park, N.W.
Ruthen, Charles Tamlin, H.M. Office of Works, Storey's Gate, S.W.

The R.I.B.A. Statutory Examinations.

Examinations for Certificates of Competency to act as district surveyor under the London Building Act, 1894, and as building surveyor under Local Acts and Authorities, will be held in London on October 24, 25, and 26, 1917. Applications must be sent in to the Secretary, R.I.B.A., on or before October 10.

COMPETITION.

Designs for Printed Fabrics.

A competition for designs for printed fabrics is being promoted by the Design and Industries Association. Designers wishing to compete are invited to send their names, together with specimens of their designs—not more than two—to the Honorary Secretary, Design and Industries Association, 6, Queen Square, W.C.1, not later than November 1. It is not necessary at this stage to prepare special designs, but it is essential that the designs submitted should be for surface decoration in colour to enable the judges to select six competitors for the final stage of the competition. The competition is not limited to professional designers, and in order to assist those without previous experience the fullest particulars will be issued to the six competitors who will, on the grounds of creative ability, be chosen for the final stage.

In the final stage of the competition six selected competitors will be required to prepare designs for machine and hand-printed fabrics—one design in each class. The promoters undertake to purchase at least one design in each class, for which the sums of £15 15s. and £21 respectively will be paid. Further particulars appear in our advertisement columns.

A LADY'S VIEWS ON HOUSE-PLANNING.

I submit, writes Mrs. Margaret Heitland, in the "Queen," that if we of the middle-class rest heavily, as someone has said, on the class below us, we have our excuse in the fact that architects, builders, and domestic servants all appear to have conspired to bring about our present helplessness.

Here and there, notably in the modern garden cities and garden suburbs, people have emerged from their helplessness, their efforts being much abetted by architects who have realised their craving for self-maintenance. My hope is that women who decide to follow the architect's calling will, at the same time, resolve to create dwellings which their owners can have to themselves. Only those who have lived always in semi-publicity can realise the deep satisfaction of inhabiting rooms where they can leave books and papers exactly as they please, knowing that nothing will be disturbed, dusted, or looked at, except by themselves. But, it will be objected, the strength of each person is limited; and there are many interesting things to do besides cleaning one's shoes and tidying one's own room. Certainly; but a good deal of domestic as well as quite other work can be accomplished in our marginal time, always provided the dwelling is suitably equipped. I say the dwelling rather than the house, because it is towards the modern "court" or block of little independent flats that the fancy of many of us will turn. Each flat should have enough in the way of cooking possibilities to enable the tenant to cook her breakfast or any quite simple meal if desired. There should accordingly be in each flat a diminutive kitchen, or, at the least, a gas-ring. But a restaurant, run on club lines by a committee of the tenants of the court, is convenient for the main meals. And for what concerns the running of the restaurant, a staff of cooks, waitresses, and the rest is, of course, necessary. Only, in each flat itself let the tenants be, if they wish, their own masters—that is to say, their own servants. Then, if they wish to put up a visitor, and if they have an extra room, they can receive their guest. The guest will make his (or her) bed, polish his shoes, and light the geyser for his bath. Therewith the trouble ends; for I am assuming that, in cold weather, an electric heater or gas-fire can be lit as required.

SOME HINTS ON BRICKWORK.

A paragraph in the "Engineering Gazette" sets out some practical points in brickwork that need occasional restatement. If you are having a place built, be it house or factory, don't be content to specify nine-inch brick walls (or whatever thickness is necessary) without going into a certain amount of detail as to the brick. You can't expect the same stability from a "wire-cut" as from a pressed brick with a frog—there is not the same key for the mortar. "Common stock of good quality" is rather vague, and a little more detail is desirable. If you want red facing bricks don't forget to say so; there are plenty of colours, and a builder will supply you with those he can get most easily and cheaply unless you specify your preference, and in many districts the clay provides a most unlovely yellow or drab variety. "Best hard-burnt" is a useful definition also. But whatever bricks you use be sure they are used *wet*. A mere sprinkling over a heap of bricks before they are carried up the scaffold is not enough: nothing less than a hose should be employed. But, if you can manage it, it is much better to put them into a tub of water so that the water soaks into every pore. It is easy when you are sending up boxes of them by a big Scotch crane, because, with a big enough tank, the whole boxful can be plunged overhead in it and then wound up again. On smaller jobs it is more trouble, but it is worth the trouble. Mortar on a dry brick sets before it sticks; it does not adhere as it would to a thoroughly wetted surface.

PUBLISHER'S ANNOUNCEMENT.

THE question of the cost of Advertising is governed entirely by the circulation of a publication. The prices for small Advertisements enumerated below are framed upon the lowest possible basis in order to allow the use of the columns of the Journal for "Wants," &c., at a figure well within the reach of everyone.

Advertisers are purchasing the circulation of a paper in buying space for their announcements, and we are able to announce that "The Weekly Nett Sale of The Architects' and Builders' Journal is larger than that of any other Architectural Journal."

Appointments Wanted.

4 lines (about 28 words) 1s. 6d.; 3 insertions, 3s

A.R.I.B.A. disengaged. One year over military age. Recent experience large factory work.—Box 48.

CLERK of Works (disengaged) desires appointment. Four and a half years with last employer. Experience in large jobs. War cause of being disengaged. —Reply to C. L., 241, Rosendale Road, London, S.E.21. 39

CONTRACTOR'S General Foreman. Age 45. Practical, well experienced, various large contracts. Also Panel Building and Ferro-concrete. Good references past and present employers.—Charles, 17, Chelsham Road, South Croydon.

CONTRACTOR'S General Foreman. Good references. Extensive London experience, thus—Foreman of joiners, ditto shopfitters, alterations, residential, railway station, garages, power station, etc., comprising drainage, ferro-concrete, concrete, brickwork, steel construction, good detail draughtsman, taking off quantities, management of men. Contracts completed to £18,000.—Charles, 2, Albion Gardens, Hammersmith, W.

FOREMAN Painter (Working or Walking) seeks Re-engagement. Fifteen years' experience. Trustworthy, reliable. Thorough control of labour. Age 43. Or piecework.—Reply F. W. S., 50, Churchill Road, N.W.2.

GENERAL Foreman seeks Re-engagement. Town or country. Trade, Carpenter. Competent, reliable, and energetic. First-class references. Terms moderate.—J. T. S., 64, Portobello Road, Notting Hill, W.

GENERAL Foreman seeks Re-engagement. Has long experience in carrying out works of every kind, including W.D. contracts. References good. —J. R., Lyncroft House, Lyncroft Gardens, West Hampstead, N.W.6.

KEEN Up-to-date Man. Interviewing, measuring, estimating, etc. High-class Decorator. Smart supervisor. Highest testimonials. Most successful. Twenty-five years' varied experience.—Pigmentum, 5, Larden Road, Acton, W.

WANTED, in West-End Architects' Office, post as Tracing Clerk by Lady with a few months' experience. Salary 30s. a week. Disengaged.—Spes, Box 47.

WORKING Foreman Painter wants Re-engagement. Used to taking charge. Any class work. Good colourman. Excellent references. Town or country. —C. W., 11, Simpson Street, Battersea, S.W.

Appointments Vacant.

6d. per line.

BUILDER'S Clerk, used to buying and getting materials on to Jobs. Good berth for active and reliable man. Government work.—State experience, age, and salary, and send copies of references, Box 44.

JUNIOR Assistant wanted, ineligible for war service, who can measure and plot plans of buildings, survey and value dilapidations accurately.—Write, stating qualifications and salary required, to A. B. C., Box 5,135, Willings, 125 Strand, W.C.2. 37

Miscellaneous.

6d. per line.

BOOKS.—Books on Building Trades, Engineering, Educational, Literary, Technical, and all other subjects; second-hand at half prices; new books at discount prices; catalogues free; state wants; books sent on approval; books bought; best prices given. W. and C. Foyle, 121-123, Charing Cross Road, London, W.C.

TO ARCHITECTS COMPETING.
SCHEMES AND ESTIMATES FOR ENGINEERING WORK

(Lighting, Heating, Ventilation, and Sanitation), and Architectural Metal Work, supplied free of charge of **STRODE AND CO., LTD.,** 48, Osnaburgh Street, London, N.W., and 18, Easy Row, Birmingham.

SECOND-HAND Optical Mart
For the Purchase and Sale of
LEVELS, THEODOLITES, DRAWING INSTRS.—Clarkson's, 338, High Holborn, London, W.C. (Opposite Gray's Inn Road).

WANTED, good second-hand portable oil engine suitable for coupling to pump for contraction use.—Send particulars and prices to W. H. Gaze and Sons, Ltd., Contractors, Walton-on-Thames. 38

THEODOLITE and several Surveying Instruments for sale cheap.—Apply 24, Gerrard Street, W., where they can be seen. 46

WEST-END Builder desires to sell Business with turnover £6,000 per annum. Premises held on long lease.—Box 45.

Educational Announcements.

6d. per line.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

BUILDING SURVEYING.—Examinations for
tificates of Competency to act as DISTRICT S
VEYOR under the London Building Act, 1894,
as BUILDING SURVEYOR under Local Acts
Authorities, will be held in London on October 2
25th, and 26th, 1917. Applications will be rece
until October 10th.

IAN MACALISTER,
Secretary, R.I.B.
The Royal Institute of British Architects,
9, Conduit Street, London, W.1.

R.I.B.A. EXAMINATIONS.

Special personal system of preparations by
respondence or private tuition, Bond and Ba
(A. G. Bond, B.A., Oxon, A.R.I.B.A.), 96, Grosve
Road, S.W. Tel. 7036 Victoria.

Auction Sales.

9d. per line.

HAREFIELD VALLEY, MIDDLESEX.
(2 miles from Denham Station, 3½ miles from Uxbridge.)

**MESSRS. JOSHUA BAKER, COOKE AND ST
DEN** will SELL BY AUCTION at the MART, E
on THURSDAY, OCTOBER 4th, at 2 p.m.,
BROADWATER FARM, with House, Buildi
and 144 acres. Three-quarter mile frontage to
Grand Junction Canal, with future possible devel
ment for Factory Sites, and beds of gravel
believed to exist.

For particulars, with Plan and Conditions of S
apply to the Auctioneers, 11, Southampton R
W.C.1.

Mr. JOHN WATERS BOUGHTON (deceased).
ON MONDAY, OCTOBER 15, 1917.
PORTSMOUTH.

FIELD AND PALMER are instructed to SELL
AUCTION, at their Property Mart, 3, King's Ro
Southsea, on the above date, at 7 o'clock in
evening, in two lots:

A commandingly placed FREEHOLD BUILDI
SITE of public interest, forming the junction
COMMERCIAL ROAD with LAKE ROAD, LA
PORT, possessing an area of 22,000 ft. and l
frontages to those thoroughfares and to Oxf
Street.

Another important FREEHOLD BUILDING SI
is just off the TOWN HALL SQUARE, POR
MOUTH, close to the Town Railway Station a
lying between Marylebone Street and Sussex Stre
with an approximate area of 25,000 ft., has a p
minent approach, visible from the Town Hall, in t
late licensed premises, the "Richond Arms,"
the corner of Greetham Street and Sussex Street.

Vendor's Solicitors: Messrs. Biscoe-Smith a
Blagg, 148, High Street, Portsmouth.

The Rebuilding of Belgium.

EVERY far-seeing business man knows that the resolutions adopted unanimously at the Allies' Economic Conference held in Paris opened up tremendous opportunities for the future. In order to derive full benefits from the policy to be adopted, it is essential for English contractors and manufacturers to acquaint themselves with all the requirements and conditions affecting their business on the Continent.

An enlightening and valuable book embodying the needs of Belgium with respect to the Building Trade has been written by two eminent Belgians for the express purpose of showing English contractors and manufacturers frankly and clearly how this side of the Belgian trade is to be captured.

Every contractor and manufacturer should have a copy.

Price 1/. Postage 1d. inland.

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"French-English Glossary of Architectural and Building Trade Terms."

IT seems to be evident that the French language will be almost an essential under the new conditions of trade which are so rapidly opening before contractors and manufacturers.

No ordinary knowledge of French, however, includes technical and trade terms, and such terms are not to be found in the ordinary dictionary.

The book contains a useful collection of words and phrases most commonly in use in the building and kindred industries—just those very terms which are most difficult to find when they are wanted. Such a book is practically an essential to every manfacturer and contractor.

Price 1/- **Postage 1d. inland.**

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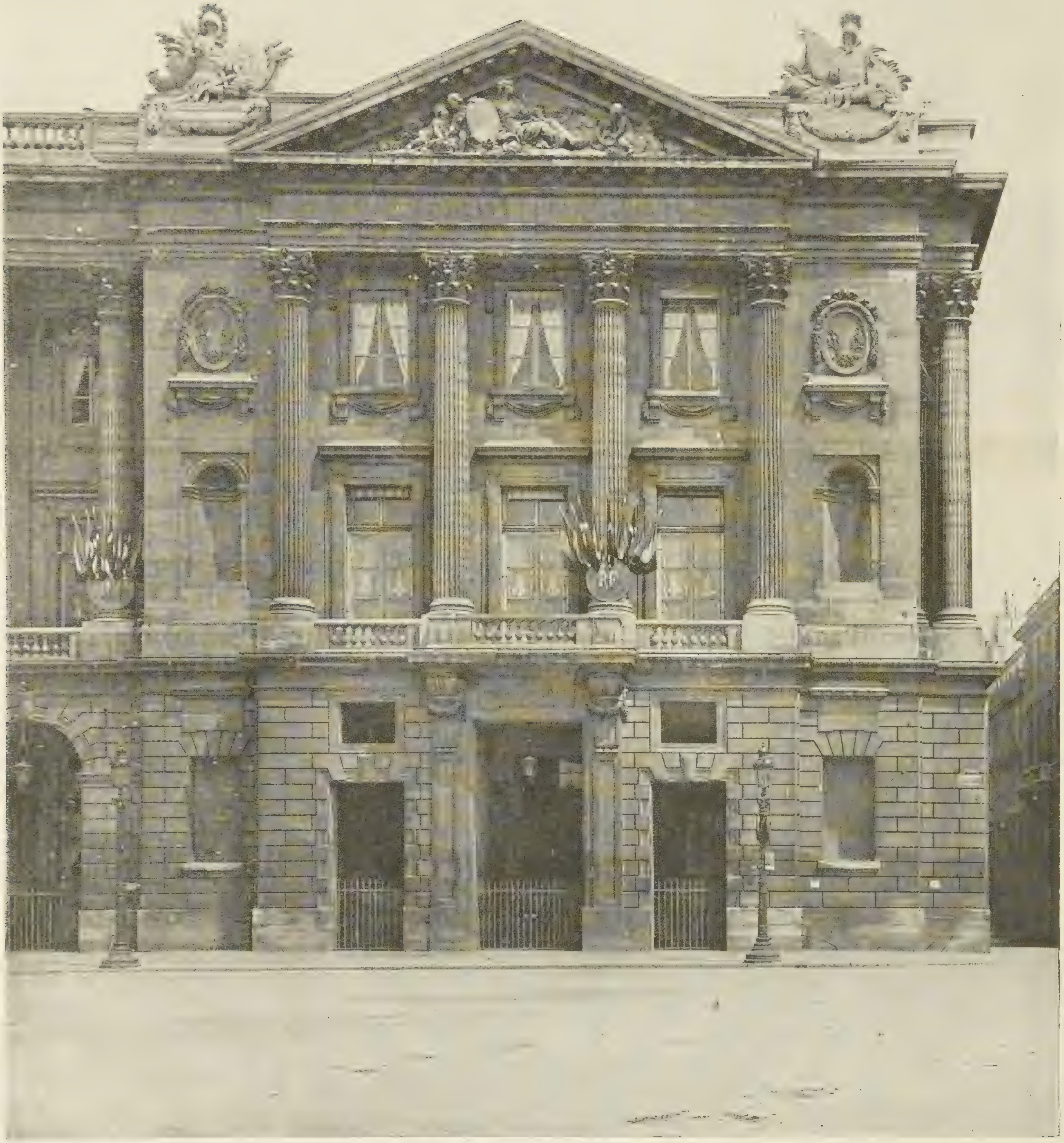
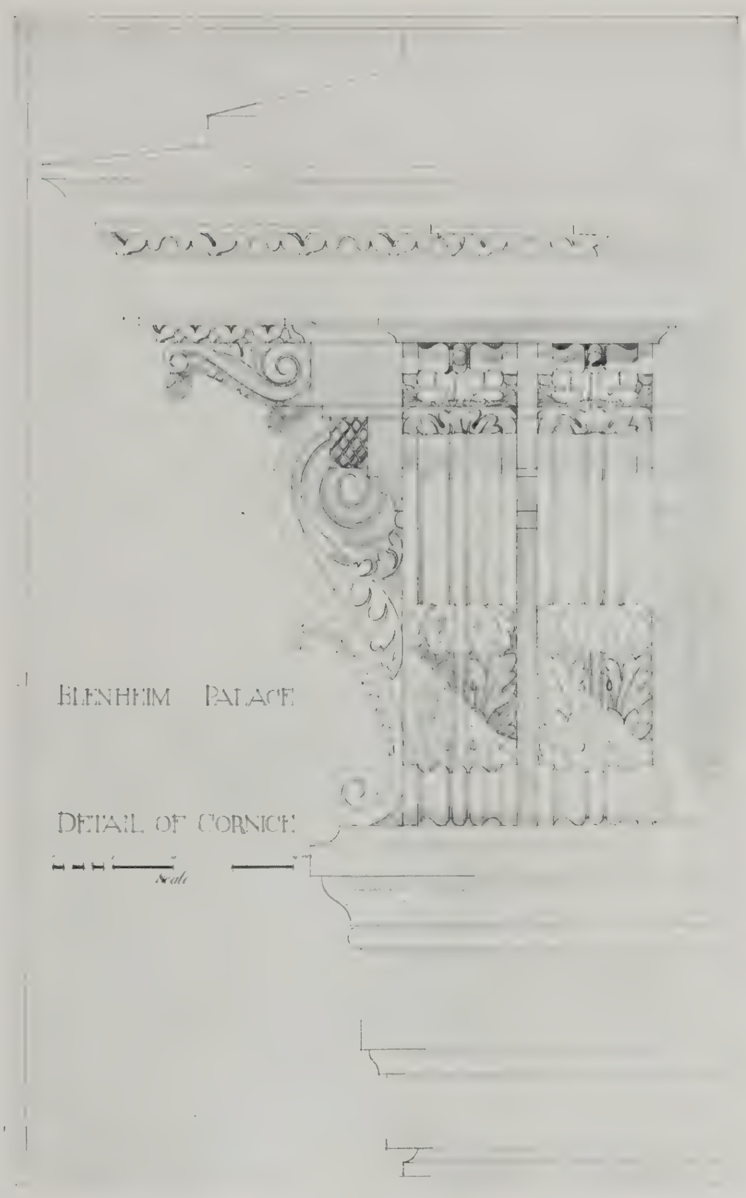
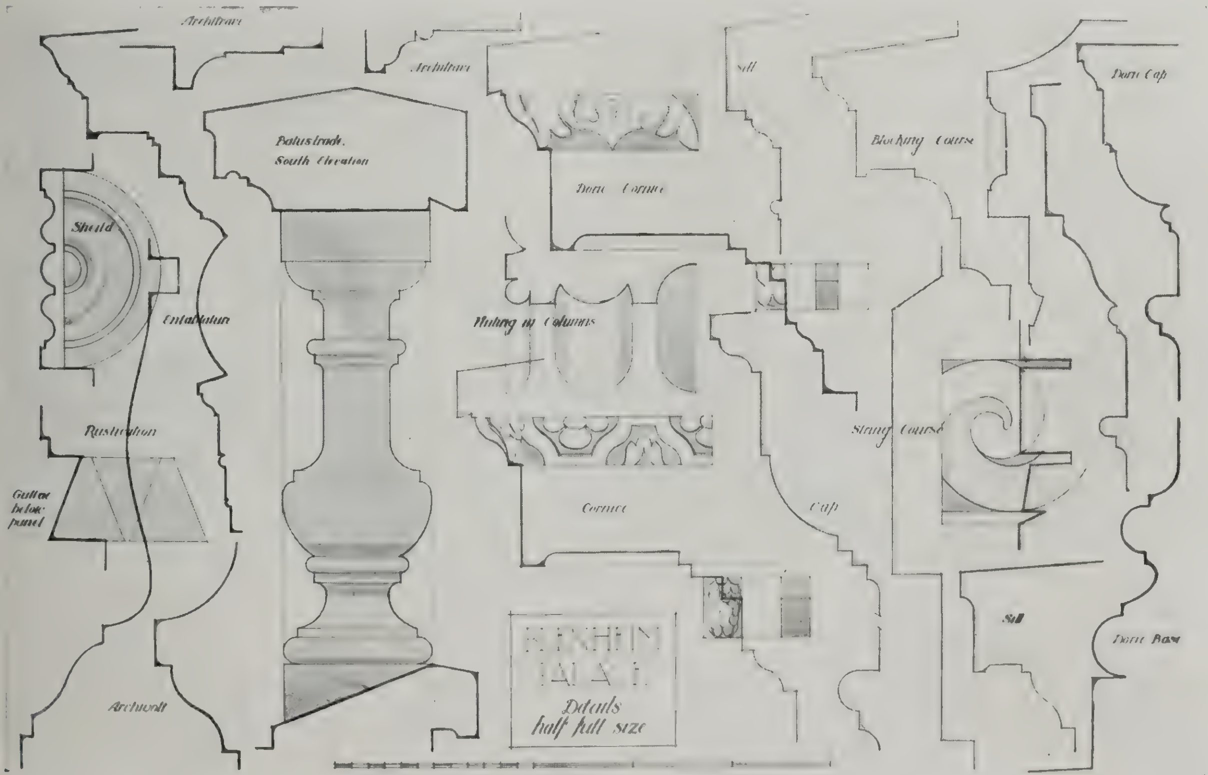


MONUMENTAL ARCHITECTURE (SERIES II.). XXVIII.—END PAVILION OF THE MINISTRY OF MARINE, PLACE DE LA CONCORDE, PARIS.
JACQUES ANGE GABRIEL, ARCHITECT.



Detail of Cornice.



Contours of Mouldings.

MONUMENTAL ARCHITECTURE (SERIES II.). XXVII.—BLENHEIM PALACE, WOODSTOCK, OXFORDSHIRE: DETAILS.

(From "The Liverpool Architectural Sketch Book.")

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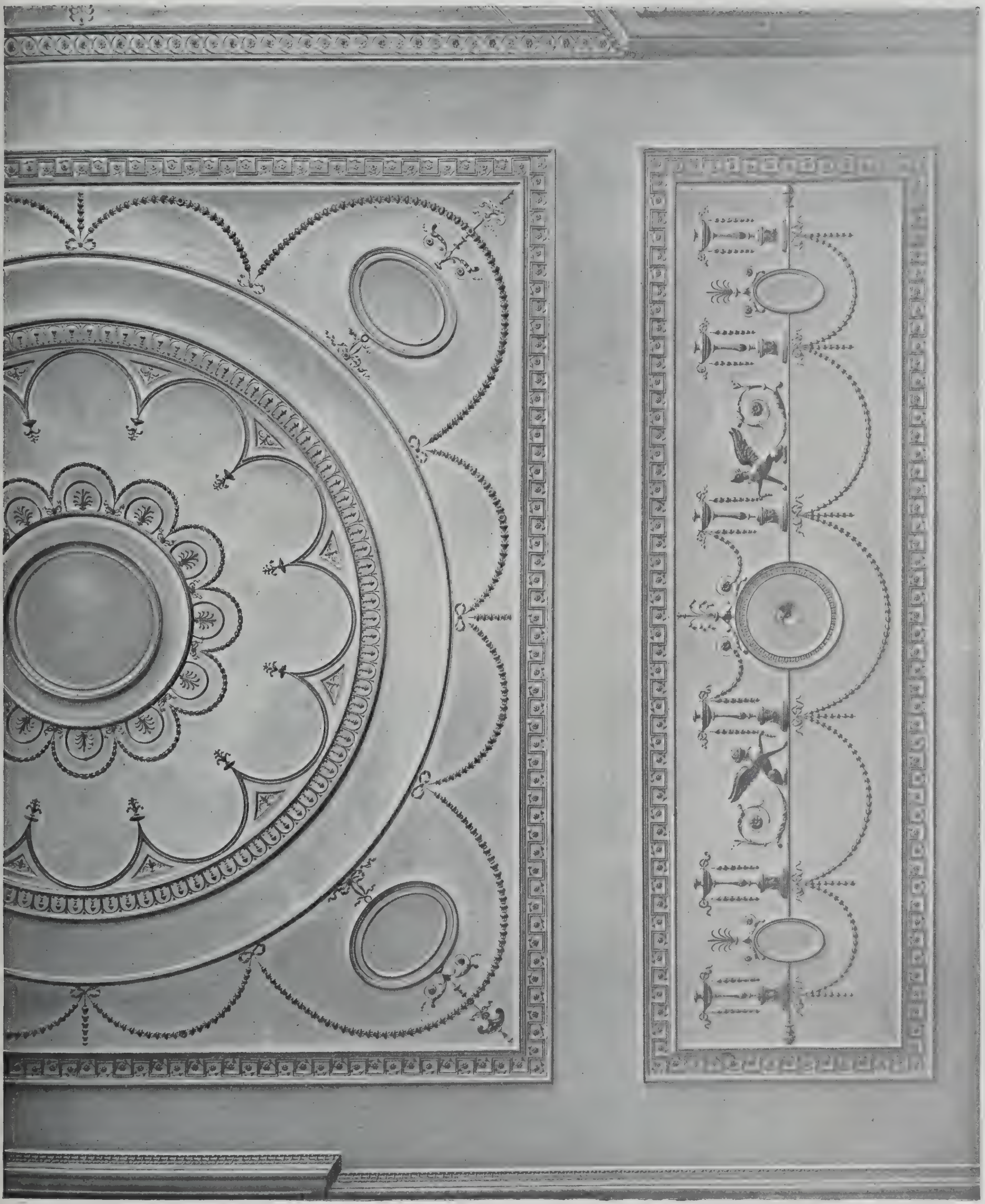
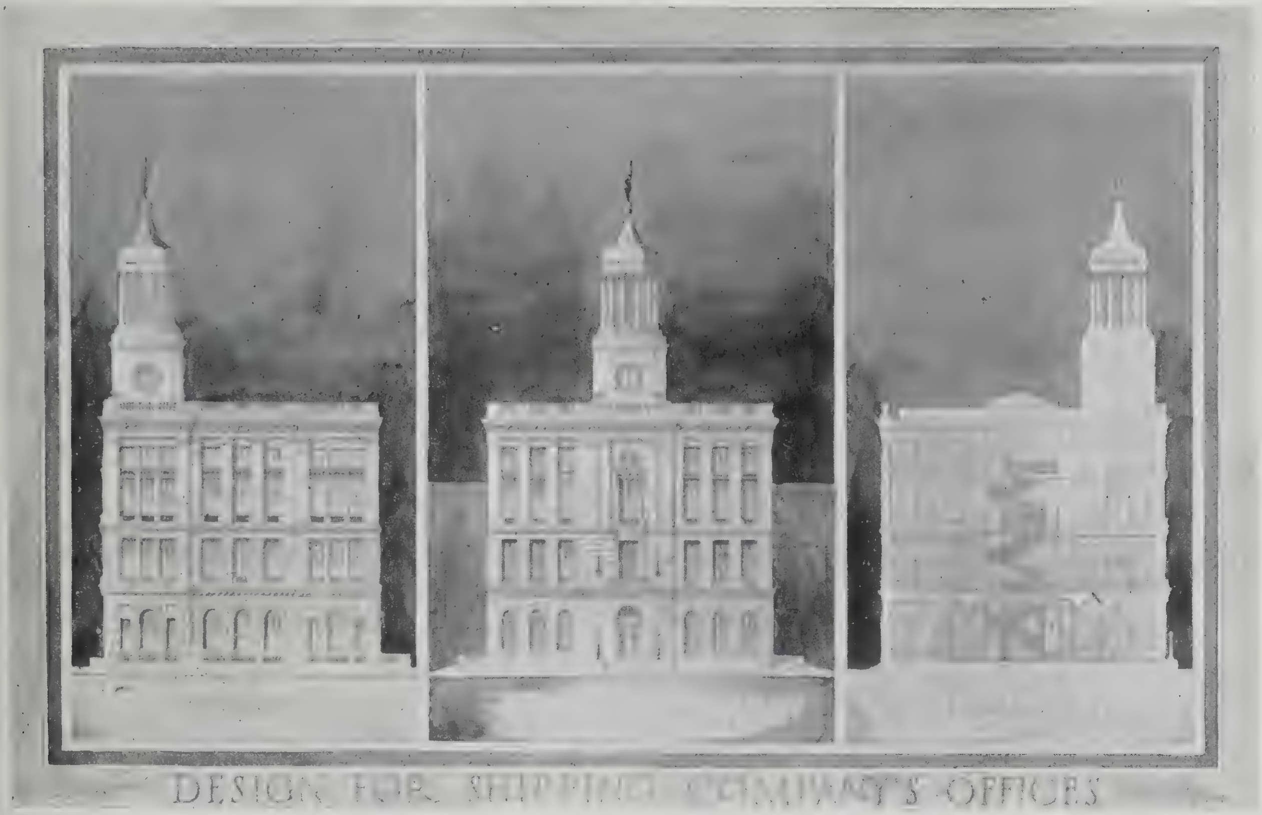
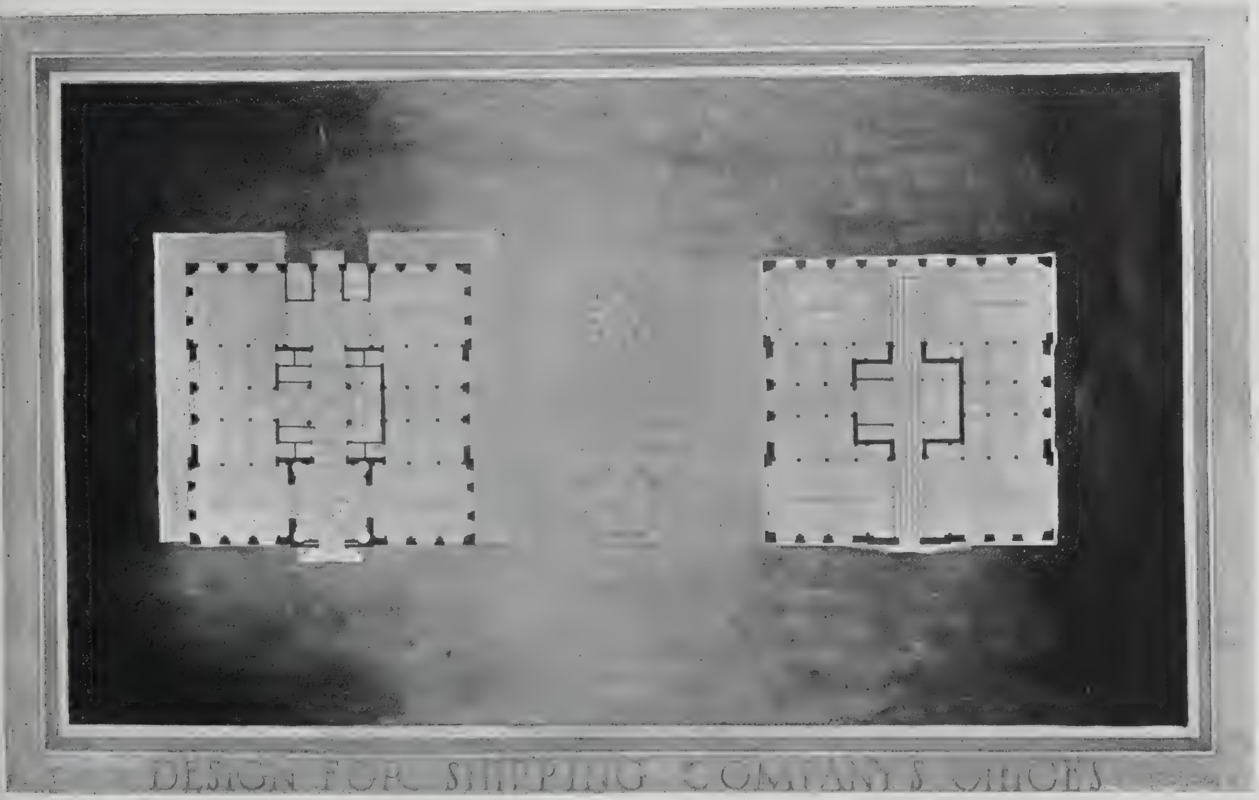


DETAILS OF CRAFTSMANSHIP (SERIES II.) XLI.—CEILING OF GREAT DRAWING-ROOM, HAREWOOD HOUSE,
HANOVER SQUARE, LONDON.





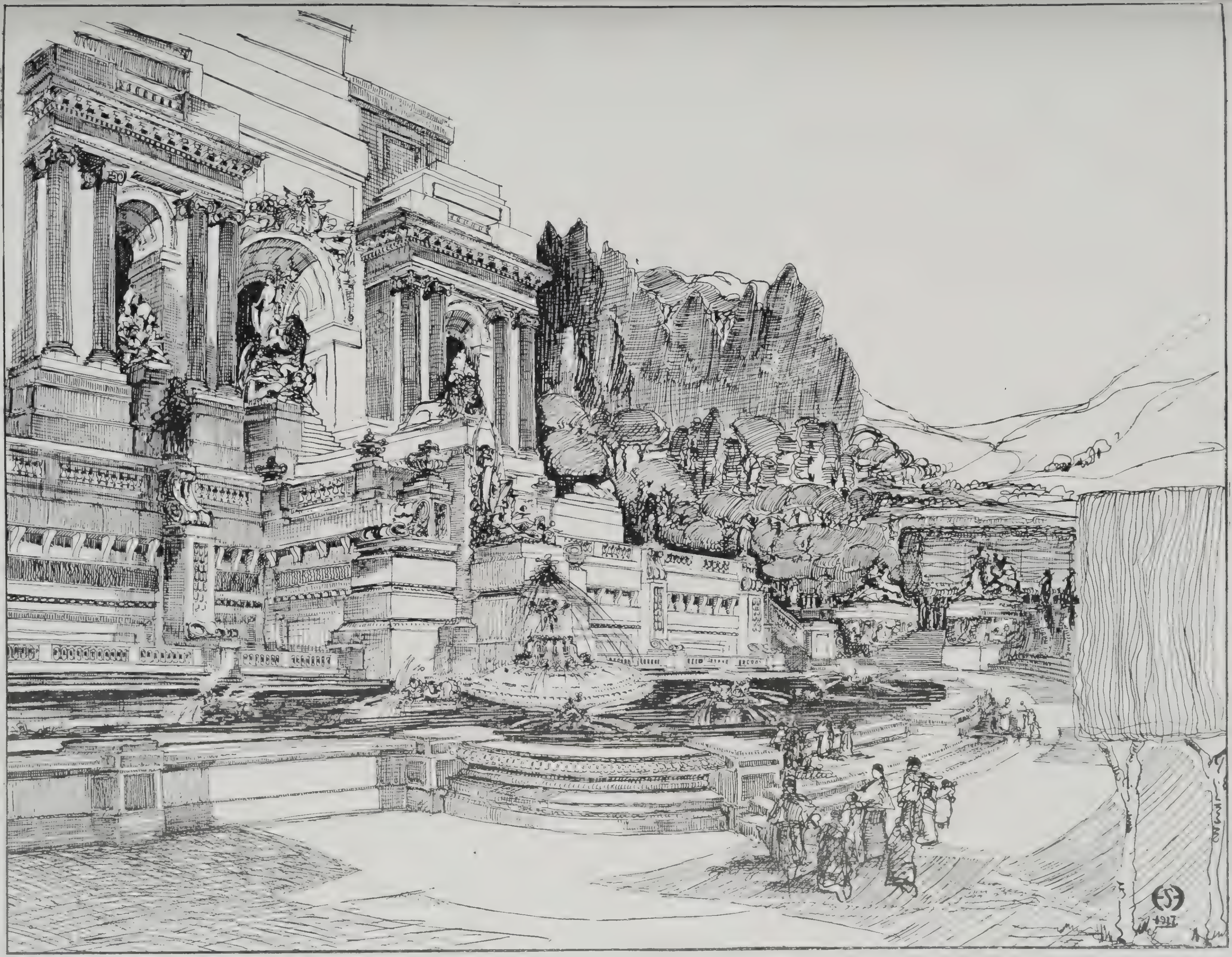
STUDENTS' DRAWINGS (SERIES III.). VIII.—DESIGN FOR A SHIPPING COMPANY'S OFFICES.

BY A. C. HOLLIDAY.

(Liverpool School of Architecture.)

OF THE
UNIVERSITY OF ILLINOIS

to "*The Architects' and Builders' Journal*," *Wednesday, October* 3, 1917



ARCHITECTURAL IDEAS.—VI. BY AN ARCHITECT ON WAR SERVICE.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

OCTOBER 10, 1917. *TOTHILL STREET, WESTMINSTER.* VOLUME 46. No. 1188.

URHAM has adopted, very literally, the policy of the open door. Since the days of Cardinal Langley, early in the fifteenth century, the t double western door of the cathedral has been ned only on special occasions, the last being the norial service for the late Queen Victoria. Now, ever, it has been decided "to keep the door per-ently open" as an entrance and an exit for all and iry, not only on high days and holy days, but at easonable times. Consequently, we are told, it is possible to see the interior by daylight, instead of ugh a glass darkly. This is a local concession, but ems to admit of a fairly general application. i-opaque stained-glass windows are now become ommon that cathedral and other churches must ls throw open their doors to let in a little daylight. was an excellent expedient of the ancient ptians to correct the inefficiency of their empty ghts; but the climate of Durham is not as the ate of Karnak, and at the equinoxes the opening is great door might procure the temporary conver- of the cathedral to a Temple of the Winds. That be as it may be; but, nevertheless, we cheerfully cribe to the theory that doors should be opened sufficient frequency to prevent their furniture's ng from disuse. There is something invidious in opposite policy. An open door smiles friendly you; one that is kept constantly bolted and ed against you frowns portentously, and gives an f superciliousness to the building. The exampl urham may be commended to the Dean and ter of St. Paul's, where the great western door is ldom thrown open that very few Londoners have the interior of the cathedral in the full grandeur s magnificent length from west to east. Here, ver, there is a practical difficulty: the doors are ig and too heavy for ordinary opening and shut- and the alternative of leaving them wide to the and dust of Ludgate Hill is not reasonable. Still, undays in summer, greater justice would be done e cathedral's noble vista if the great doors were vn wide open.

* * * *

rham's western doorway, once wholly external, hidden on the exterior when, in 1175, Bishop Pudsey put the Galilee or Lady Chapel in front This chapel is well lighted, and, but for the d door, would illuminate a considerable part of athedral. Above the Galilee roof is a large ow which was inserted about the year 1346. It med within a pointed arch, over which is the ding of the original great semicircular arch. e the arcading which crests the wall containing window is a small triangular gable, which, if it no other purpose, serves as a contrast to the hori- l lines beneath it, and to give unity to the two cles or steeples which spring from the flanking English towers. Seen from a distance, the ing of these projections with the great central ndicular tower, whose massiveness they asise by their slimness, is peculiarly charming. this effect calculated, or is it the result of a lucky ent? One is sometimes inclined to think that est effects are more often accidental than ned: and if it be true, as some would have us e, that our early churches were built as it were ctively, and without any calculated effect other that derived from memory, it would seem that formal composition, based upon intensive study, is but a poor substitute for the native flair which it has sophisticated if not superseded. But those who hold what may be called the inspirational theory are unable, in the nature of the case, to support it with evidence; whereas archæological discovery tends more and more to confirm the belief that even the prehistoric builders had a scientific rather than an instinctive knowledge of their craft, and it may therefore be fairly inferred that this knowledge included so obvious an expedient as the preparation of some sort of preconceived design. To hold that plans never existed because none have come down to us is as gratuitous an assumption as it would be to suppose that the ancients built nothing but palaces, temples, and tombs because the traces of their "small domestic work" have vanished. Surviving Mediæval documents should be carefully re-examined from this point of view. It might turn out that a few drawings hitherto mistaken for sketches of buildings *in esse* are really designs for buildings *in posse*.

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Flambard (1099-1128) built this great western doorway whose use has just been re-discovered. On the Galilee side, writes Mr. J. E. Bygate in his monograph in Bell's "Cathedral Series," it consists of an arch of four orders ornamented with chevrons. The inner face is very similar to the outer, but is shallower, having only two orders. Its shafts and capitals are without decorations, but the arch is ornamental with chevron and a leaf patern with medallions carved with grotesque animals. Wyatt — "the unspeakable James," who had no bump of reverence, and did some inconceivably foolish things at Durham—in 1796 pulled down the magnificent Norman chapter-house, and he removed the great Early English rose window from the east-end of the Nine Altar Chapel—wanted to reopen the great western doorway by pulling down the Galilee chapel, from which he intended constructing a carriage-drive to the castle. He had actually begun operations on this mad scheme when Dean Cornwallis and the Society of Antiquaries laid him by the heels. The Norman chapter-house has been rebuilt as a memorial to Bishop Lightfoot. Durham Cathedral had its origin in the building of a shrine for the "incorruptible body" of St. Cuthbert, to whom the cathedral is dedicated. "It is well known," says Mr. Bygate, "that for some reason women were not allowed to enter any church where St. Cuthbert's shrine stood, nor even any church dedicated to him. At Lindisfarne a separate church was provided for them, and at Durham the Galilee chapel was added for the same purpose. This chapel, which contains the supposed remains of the Venerable Bede, is a most interesting example of the Transition period, and its destruction by Wyatt would have earned him a stronger name than "the unspeakable."

* * * *

That blessed word "utility" has been launched against Mr. Chalmers's design for Belfast Cathedral. Dr. R. Kyle Knox, who was one of the original promoters of the scheme for a cathedral at Belfast, states that at the outset the idea was, as he was authorised to express it at the time, that not one shilling was to be expended on any purpose but absolute utility. "The building the Bill contemplated would not compete in splendour and magnificence with those colossal edifices which the mind connected with the word cathedral, but it would be spacious and dignified." This is but a cold conception of a cathedral, and, as the doctor admits, does not conform to the general idea of a cathedral—"absolute utility" forbids. It is a bleak phrase. Surely, if it is worth while to build a cathedral at all, it is worth while to do it nobly. Of all buildings, a stinted cathedral would be the most melancholy spectacle. It would be a discredit to the city of which it ought to be the crown and glory. Why should Belfast, of all cities of the world, shrink from the "competition"—or, as we would put it, the comparison—that is inevitable? Belfast would not greatly relish the distinction among cities of possessing the most absolutely utilitarian cathedral. Having determined to build a cathedral, it should have the courage of its ambition. Mr. Chalmers, according to all accounts, has produced a most dignified design, which, if it materialise, will justify Belfast in lifting up her head among the cities. An "absolutely utilitarian" cathedral would do her no credit; and, therefore, in a certain sense, it would not be "absolutely utilitarian." It would, however, be absolutely futile.

* * * *

A garden suburb complicated with coal-pits is, it may be hoped, sufficiently rare to justify a brief note. Walkerville, somewhere in the North, is protesting against a menace to its amenities involved in the proposed reopening of "the old Henry pit"—an enterprise that, according to representations made at a meeting of protest, would play Old Harry with a scheme for developing the Walker estate on garden city lines. Although perfervid objectors in public meeting assembled can seldom be accused of timorous understatement of their case, and although it may be true that, as the proverb avers, not even Old Harry himself is as black as he is painted; nevertheless, it is credible that, at its best, a coalpit cannot be regarded as a direct contribution to scenic charm, and the protest against the threatened resumption of Old Henry's activities therefore commands our sympathies. Of two things one: either Old Henry will remain effete, or there will be no garden suburb of Walkerville: a colliery village and a garden suburb standing to each other in about the same sort of relationship as purgatory and paradise.

* * * *

In one of his incomparable essays, Matthew Arnold dwells half-humorously on the influence of names, place and personal. A poor girl who had attempted suicide bore a rather depressing surname, and Arnold insinuates that her name was an evidence of a certain disregard for beauty, a certain absence of culture among the masses. He cited some very quaint names of American towns as pointing the same moral, although it would have been in better taste, surely, to draw his examples from our own country, which in all conscience is rich enough in such grotesqueries to render importation unnecessary. "Punch" used to delight in the collection of such euphonious names (not all native, however) as "Etukishook, Gaukroger, J. C. Clegg, Sir Fortescue Flannery, and the Cardinal Merry del Val," but, unlike Matthew Arnold, drew no æsthetic moral from them. This note is prompted by two fascinating place-names that leap to the eyes in turning over the sumptuous pages of our excellent American contemporary the "Architectural Review" of New York, in which we find that Mr. Raphael Hume has built a rectory at Hackensack; Messrs. Schuchardt and Judell have designed a residence at Milwaukee, Wis.; and Mr. John Russell Pope has worked wonders at Wickatunk. America certainly excels us in picturesqueness of nomenclature, whether of places or persons; yet one can never turn over a name-list of any nationality without finding in it something stimulative of the various emotions — mostly the risible. In our contemporary we notice that a firm of architects wl
work is illustrated is Messrs. Bellows and Ald
From the R.I.B.A. Kalendar we could pick a m
more appropriate partner for Mr. Bellows, but or
consideration would we venture to mention his n
in this connection. Yet the collocation would b
harmonious as that of Gamble and Turnpenny.

* * * *

Town-halls are among the topics of the week.
Denbigh a fine one has been formally declared o
with a richness of ritual which sets the Englishi
aghast. In England there is no more prosaic c
mony than that of opening a town-hall, the only to
of poetry about it being the presentation of a gol
key to the opener, who is by no means invariably
honoured. At Denbigh there was a fine flow
oratory, and rather more praying and hymn-sing
than would be heard at the consecration of an Eng
cathedral. We are by no means deriding it,
merely noting the differences of temperament
distinguish our Welsh compatriots, to whom, ind
we should be profoundly grateful for the touch
spirituality that not only vitalises all their pu
functions, but inspires their art and keeps alive
Celtic traditions to which our country as a whol
more deeply indebted than is perhaps gener
realised. With us, however, although there are
bably very few of us who could disclaim an infusio
Celtic blood, or who would in any case care to do
the opening of a town-hall makes no sort of emoti
appeal. It is a terribly dull affair, apt to reach
uttermost limits of boredom. We get much neare
enthusiasm on hearing that a new town-hall is to
built. This mild excitement is ours on learning, f
an announcement made last week, that the ratepa
of St. Pancras are determined to erect a new to
hall as soon as possible after the war is finished. T
are two schemes afloat. One provides for rebuil
on the present site at an estimated cost of th
thousand pounds; the other has the more ambit
aim of purchasing a better site, even though the
cost of the scheme should mount up to a round hun
thousand. Our sympathies are with the m
courageous view. Civic authorities cannot af
to be parsimonious in building, especially when
town-hall is in question. As a mere matter of
ness, a town-hall should be as magnificent as
burgesses can make it—a fact that is much m
clearly recognised on the Continent than it is in
country; where, however, several provincial cities
set London an excellent example.

* * * *

Chequers Court, the fine old red-brick man
which Sir Arthur Lee has so handsomely given to
nation for the use of its Prime Ministers, was bui
1566, and is racy of its period. It is surrounded
park of some three hundred acres, and its sunk la
and formal courts are right Tudoresque. Standin
the Chiltern Hills between Aylesbury and Great
senden, at a height of about six hundred feet ab
sea-level, it commands wide-spreading views of
smiling and peculiarly English landscape of the
that brings peace and healing to the beholder. It
be always a serious rival to Downing Street,, and
a time may give Criccieth some grounds for jealo
One of its obvious advantages is that it is just
enough from London to enable the Prime Ministe
forget his cares on the way down, but not far eno
to give him a tiring time in train or motor. In
of distance Hatfield was equally convenient for
Salisbury, Beaconsfield for Disraeli, Dollis Hill
Gladstone, the Durdans for Lord Rosebery;
Pitt's place at Hayes, though much nearer as the
flies, was a more formidable journey, considering
it depended on horse power. A view of Cheq
Court appears on page 158.

HERE AND THERE.

THOUGH it is sixty-two years since Mr. James
Fergusson published his "Handbook of Archi-
tecture," and fifty-five since he added what he
is "sequel," no one would have even a momen-
hought of weeding out those works from an over-
library. Were it but for old sake's sake they
orth the space they occupy. They are of the
that one dips into occasionally to renew one's
, to recall one's early impressions, and to revive
aded memories that are bound up with those
ssions. We love Fergusson because he was the
anion of our youth, the friend of our father,
than for his intrinsic merits; upon which, there-
we cannot pretend to pronounce impartially.
nent whispers to us that "e'en his failings lean to
's side." His habit of moralising, for example.
ugh, in common with most of the writers of his
e lost no opportunity of "improving the occa-
he is for this cause the more entertaining. Mr.
s faithfulness to King Charles's head is but a
ly exaggerated example of the cult of the fixed
from which but few Victorian writers had the
ge to disentangle themselves. Not to air one's
ets was to forfeit one's claim to character—to be
d of "principles." A writer who was not strongly
ctive in this rather distressing way was thought
ve no consistency, was suspected and accused of
hodoxy. He was invertebrate—a mollusc upon
no one could lean for support, and who afforded
slippery hold for those who would fain have
led with him.

* * * *

gusson's pet aversion was modern Gothic. He
it no rest. Of course, he aroused the anger of
oths, with whom Puginism was a religion. They
hat he did not appreciate and consequently did
dmire the Mediæval styles. He replied that,
le admiring the true Mediæval Art with the
sest enthusiasm," he could not "without regret
much talent employed and so much money
d in producing imitations of it which, though
c in outward appearance, are erected in defiance
ry principle of Gothic Art." He held that archi-
must "exercise their intellects" rather than their
ries before they could produce anything of
we might be proud; and he applied this rule
ly to the Archæologists or Goths and to the
ars or Grecians. He disliked sham antiques in
mode. About mock Gothic he waxed sarcastic,
g, "The great recommendation of Gothic Art is,
t is so rude that any journeyman can succeed in
g it; and they have done so till all our grand old
ings are clothed in falsehood, while all our new
ings aim only at deceiving. If this is to continue
itecture in England is not worth writing about;
is principally in the hope that a clear exposition
mistaken system on which the art is now prac-
may lead to some amelioration that this work has
written." There we have it. Merely to be the
ian of architecture was not enough: the public
nded a man with a mission, a herald whose
et should send forth no uncertain sound. Writing
he did, he showed considerable courage in taking
npopular side—in proclaiming himself an Intel-
al while the Emotionals were in power and were
ant withal.

* * * *

s opponents would condemn him the more for
ying, at very wide intervals, some slight traces of
se of humour. In those very serious days it was
ne to be flippant. "You are disposed to be
ous, sir," was a withering reproach, found in all
ovels; and if, by some unaccountable oversight, the author of any play omitted it, the actor would supply it as a gag. It was probably applied pretty freely to this mild departure from the dignity of historical style: "Thirty or forty years ago, if you entered a cathedral in France or England, you at once could say, These arches were built in the age of the Conqueror—that capital belongs to the age of the Henrys—that window tracery must have been executed during the reign of the first or second Edward; or that vault during the Tudor period; and so on. Not only could you fix a date on every part and every detail, but you could read in them the feelings and aspirations that influenced the priest who ordered or the builder or carver who executed them. All this is now changed. You enter a cathedral and admire some ironwork so rude you are sure it must be old, but which your guide informs you has just been put up by Smith of Coventry. You see some carved monsters so uncouth that no modern imagination could conceive them—'Brown of Cambridge, sir'; some painted glass so badly drawn and so crudely coloured it must be old—'Jones of Newcastle.' You decipher with difficulty the archaic inscription on some monumental brass, and are startled to find it ending in 'A.D. 1862,' and so on through the whole church. It is so easy for people who have attained a superior degree of proficiency to imitate the arts of those of a lower stage, that the forgeries are perfect and absolutely undetectable."

* * * *

In this passage, is Fergusson speaking from his own experience, or is he courteously stooping to the level of the average amateur of architecture? If he had no greater skill in the detection of forgeries than is here implicit, he lacked the architect's eye: as lack it well he might, seeing that, although a Fellow of the Institute *honoris causa*, he had received no architectural training beyond what he could give himself in the intervals of indigo-planting in Bengal.

* * * *

But he was, on the whole, a very sound critic; and he steered clear of the entanglements of both the Goths and the Greeks. In a notable page in which he shows that "the arts followed in the same track as literature," and draws parallels between the "Fairy Queen" and Audley End, "Paradise Lost" and St. Paul's Cathedral, the sonorous prose of Johnson and the ponderous productions of Vanbrugh, the elegance of Addison and the correct tameness of Chambers, and so forth, he adds that, the poets having exhausted every form of imitation, the architects might also have "come through the distemper" had not Stuart dazzled them with his revelations of the beauties of Greek art; then "for fifty long years the pillars of the Parthenon or the Ilissian Temple adorned churches and jails, museums and magazines, shop-fronts and city gates—everything and everywhere. At last a reaction set in against this absurdity; not, alas! towards freedom, but towards a bondage as deep, if not so degrading, as that from which the enslaved minds of the public had just been emancipated. If the Greek was incongruous, it was at least elegant and refined. The Gothic, though so beautiful in itself, is hardly more in accordance with the feelings and tastes of the nineteenth century, and is entirely deficient in that purity and in the higher elements of the Art to which the Greeks had attained, and to which we were fast approaching when the flood-tide of Pseudo-Mediæval Art set in and overwhelmed us." With some of Fergusson's later and less familiar utterances I hope to deal on a future occasion.

DIOGENES.

CHEQUERS COURT FOR THE NATION.

ON Friday morning last it was announced that Chequers Court and estate, one of the most ancient seats on the Chiltern Hills, with historical associations extending over many centuries, are to be transferred to a board of trustees, and—subject to the life tenancy of Sir Arthur and Lady Lee—the house is to be used and maintained in perpetuity as the official country residence of the British Prime Minister.

Chequers Court stands in a sheltered hollow of the Chiltern Hills, nearly 700 ft. above the sea. It is thirty-eight miles by road from Hyde Park Corner, and can be reached, by train, in one hour and a quarter.

The present house is Tudor in origin and design, but it was largely rebuilt in 1565, and restored in 1909. The surrounding estate consists of about 1,500 acres, including Coombe Hill (the highest point of the Chilterns).

A cardinal object of the scheme is to preserve, so far as possible, the main architectural and archæological features of the house and surroundings in their present restored condition. It will, therefore, be provided, and strictly enjoined, in the trust deed, that no alteration, mutilation, addition, or subtraction shall be made to the principal features of the house.

If the stipulations under this head should, at first sight, seem too rigid, it must be remembered that Chequers has passed through painful vicissitudes of "improvement and renovation," and that the recent restoration has been carried out under the best architectural advice, and with the primary object of bringing the house back to its original appearance. It is, therefore, desired to protect it against such outrages as were inflicted upon it by the vandals of the late Georgian period, and to preserve, so long as possible, its interior furnishings and works of art, which represent the tastes, collecting enthusiasms, historic relics, and ancient belongings of its long line of owners.

Following is a brief historical sketch of Chequers Court, which was formerly known as "Chekers":—

The remains of the ancient stronghold or "castle" of Cymbeline, the reputed birthplace of Caractacus (about A.D. 1), are still prominent in the park Chequers, but the earliest records of the house s that in the reign of Henry II. (1154-1189) it was residence of Elias de Scacarrio, Keeper of the Ki Exchequer. It is believed to have been rebuilt a 1326.

It remained the property of the "De Scacarrio, "De Chekers," family until the death of Sir Ralp Chekers in 1254, when it passed, by the marriag his elder daughter Katherine to Sir William de Ripa (d'Haut-rive, or Hawtrey), into the possessio the Hawtrey family.

The Hawtreys owned, and lived at, Chekers nearly 350 years, from 1254 to 1597. They rebuil house in the latter part of the fifteenth century, a was again largely reconstructed by William Haw in 1565. The present north front is virtually as he it.

On the death of William Hawtrey, in 1597, Che passed to his elder granddaughter, Mary (daught Sir William Hawtrey), who, at an early age, married (1594) Sir Francis Wolley, son of Sir Wolley, Latin Secretary to Queen Elizabeth and missioner at the trial of Mary Queen of Scots.

Mary Dame Wolley (after her husband's deat 1611) remained in possession of Chekers until she in 1637, and was succeeded by her younger s Brigetta, who had married Sir Henry Croke, "Clerk of the Pipe" in the Exchequer, son of Speaker" Sir John Croke.

Brigetta Lady Croke, the last of the Hawtreys, in 1638. Sir Henry and Sir Robert Croke were Cavaliers, and Chekers was sequestered in the h of the Parliamentary Commissioners in 1649. A position, however, was arranged, for the modest of £772 10s., and Chekers remained in the hand the Croke family until 1680, when, on the death o Robert Croke, M.P., it passed to his daughter who married John Thurbarne, M.P., Serjeant-at- as his second wife, and who died childless in 1711.

Serjeant Thurbarne died in 1712, and Che passed to his only child (by his first marriage), Jo

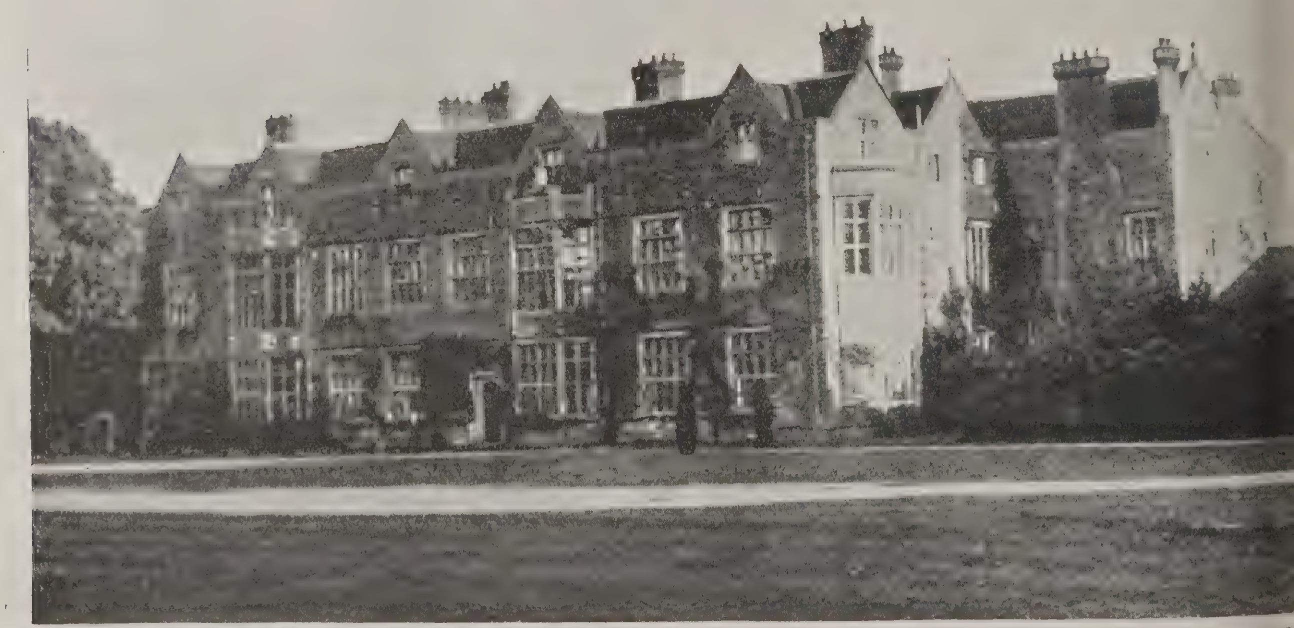


Photo : Central N

CHEQUERS COURT, NEAR WENDOVER, BUCKINGHAMSHIRE: THE OFFICIAL COUNTRY RESIDENCE OF THE PRIME MINIS narried, first, Colonel Revett (killed at Malpla- and, secondly, John Russell, son of Sir John :ll, fourth Baronet, and Frances, youngest ıter of Oliver Cromwell. It was through this last ıge that the existing collection of Cromwell relics ictures originally came to Chequers.

the death of Joanna Russell in 1763 Chequers l to her daughter, Mary Joanna Cutts Revett, had married Colonel Charles Russell. Their ir John Russell (ninth Baronet), succeeded to the , and it remained in the possession of the Russell until 1813, when, after the death of Sir John and o sons, his sister Mary Russell left Chequers to st cousin, Rev. John Russell Greenhill, who died me year.

ert Greenhill, M.P., son of John Russell Green- ssumed the name and arms of Russell in 1815, ecame Sir Robert Greenhill-Russell, Bart., in He, dying childless in 1836, left the Chequers to his kinsman, Sir Robert Frankland, Bart. dson four times removed of Oliver Cromwell).

Robert Frankland subsequently assumed the onal surname of Russell, and after the death of widow (Lady Frankland-Russell) in 1871, ıers passed to their fifth daughter, Rosalind (Mrs. land-Russell-Astley), who died in 1900, leaving state to her son Bertram. Lord Bertram Frank- Astley married Lady Florence Conyngham, and death the property devolved upon his only son.

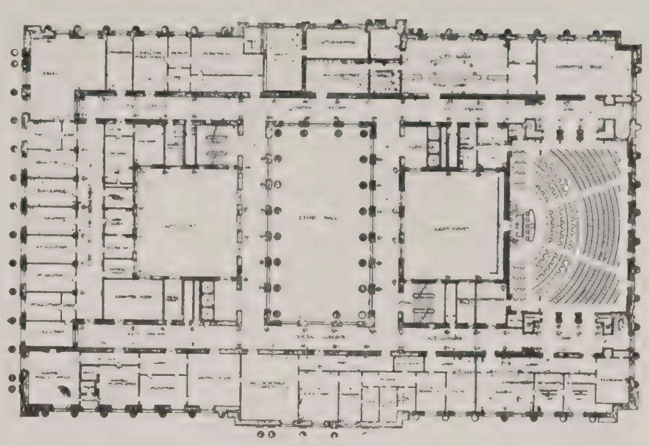
Chequers estate thus became the property of the y family, having never changed hands (except by for at least 800 years. Mr. H. J. Delaval Astley, ıst owner by inheritance, died without issue, in as the result of an aeroplane accident.

1909 Sir Arthur and Lady Lee became life ts of the estate, and restored the house and ns to their present condition. The freehold was quently acquired for the purposes of the present ıe.

THE PLATES.

The City Hall, Cleveland, Ohio.

IE development of the Cleveland civic centre is one of first importance among similar under- takings going forward in the United States. It ves not only a rearrangement of considerable ıitude, which when finally completed will have d the problem of the central points from which ity's future growth will radiate, but it will also nt in its architectural development one of the important and dignified undertakings by any ican city. The exterior of the City Hall is of te, the whole, as may be seen by reference to the s given in this issue, executed with the utmost icity and with but little ornamentation. A com- scheme of sculptured groups is contemplated for three entrances and for the attic space of main pavilion. The tendency is municipal nistration towards a plan similar to that proved xperience to be best adaptable to the con- ıs ruling in large executive or commercial build- is shown in the planning of this City Hall. The or departments were, for the most part, designed ose of a first-class office building. Wherever icable, entire departments were planned as one vith few if any partitions extending to the ceiling. advantages of this arrangement are apparent. esult is better lighting and ventilation, a free and expanse of ceiling, and the facility for the adapta- to such future changes as inevitably occur in ings of this type. The main entrance vestibule is ey marble, hone finish. In the grand lobby a order was used, executed in Boticini marble, also finished. This lobby extends through three s, and has a barrel vaulted ceiling, admitting light. The lunettes at each end are 35 ft. in diameter, and offer the best opportunity for the future introduction of mural paintings. The corridors on the first floor and also the floors themselves are executed in marble. The council chamber, extending through three stories, is executed in oak, and is reminiscent of the Elizabethan period. It has galleries at each end, and seats 750 persons, in addition to accommodation provided by desks. Behind the rostrum a space 10 ft. by 71 ft. is designed to receive a mural painting. The preliminary sketch for this space was executed by Jules Guerin. The building has an approximate content of 8,000,000 cubic feet, and cost complete rather less than £600,000. Our reproductions are from the "American Architect."



THE CITY HALL, CLEVELAND, OHIO: FIRST-FLOOR PLAN.

Ceiling from Harewood House.

Robert Adam's ceilings are among the most daring and remarkable excursions of his invention, and they form, perhaps, the one department in which his contemporaries were slow to follow him. Beyond the occasional and superficial resemblance to vaulted or ribbed surfaces, there is nothing in these ceilings which originates in constructional motifs; they are frankly ornament, and are, moreover, a complete departure from the earlier methods of plaster decoration. In England, French artists had been for some time employed in producing ornamental ceilings in low relief, but Adam made of his designs a much more powerful and integral feature in the treatment of the room. By his sweeping curves and other geometrical figures he gathered the room up, as it were, into the particular direction in which he wished to direct the eye, and by the use of similar panels and ornament to that in use on the walls he unified the whole conception. The ceiling shown in this issue is a good typical example of his very individual style of work.

Architectural Ideas in War Time.

In this example our contributor has given free rein to his imagination. This vast, rock-like composition has the aspect of a highly concentrated summary of the architecture of all time. Notwithstanding the incongruity of its elements, there is a peculiar sense of harmony in its rugged outlines and ponderous masses.

Detail of Screen, Trinity College Chapel, Oxford.

Trinity College Chapel is not a very impressive composition externally, though one of the sights of Oxford when ablaze with October colours. Unfortunately, Wren was not called in early enough to save the proportions, though he was in time to entrust to Grinling Gibbons the carving of the woodwork within. And splendid work it is, robust with the exuberance of its day. The carved and pierced panels in the screen to the west of the chapel are superbly strong and vigorous (see double-page plate). The uppermost of the four drooping buds that hang from the knotted ribbon is a hand's-breadth across.

NEWS ITEMS.

Memorial to Explosion Victims.

A memorial, in Cornish granite, consisting of a massive Celtic cross and curbing, has been dedicated "in a cemetery in Kent" to the memory of the victims of the explosion which occurred in 1916.

A Contractor's Fortune.

Mr. James Allan, of Tulloch Park Place, Cardiff, head of the contracting firm of James Allan and Co., Ltd., builders and contractors, has left a fortune of the value of £128,526. including personalty of the net value of £106,370.

Denbigh's New Town Hall.

The new town hall of Denbigh, which has just been formally opened, has been built from the designs of Mr. C. E. Elcock, F.R.I.B.A., of Colwyn Bay and Manchester; the concrete engineer being Mr. Dyson, of London, and the builders Messrs. Morton, Brown, Ltd., of Chester.

Bell's Asbestos Co., Ltd.

The directors of this company have declared an interim dividend on the Ordinary shares of 1s. per share less income-tax (being at the rate of 10 per cent. per annum) on account of the profits for the current year. The dividend will be paid on October 16, and the Ordinary share transfer books will be closed from October 2 to 16, both dates inclusive.

New Supplement to R.I.B.A. Kalendar.

Instead of the usual "Kalendar," it has been decided to issue a Supplement to the "Kalendar" of 1915-16 on the lines of that issued last year, but containing lists of new members and changes of address during the past two years. Members who have not already notified their change of address are requested to be good enough to do so not later than October 15.

Mr. Stephen Easten as Sheriff.

At a special meeting of the Newcastle City Council on October 3 Mr. Stephen Easten was nominated as Sheriff of the metropolis of Tyneside, in succession to Mr. A. Munro Sutherland. As our readers are aware, Mr. Easten is a builder and contractor of much more than local repute, and has done important work for the people of Newcastle as chairman of the Estate and Property Committee. He is a prominent member of the National Federation of Building Trades Employers of Great Britain and Ireland.

King George's Fund for Sailors.

The "Daily Telegraph" has decided to make a special appeal to its readers in support of King George's Fund for Sailors, and desires to associate with its own effort its many contemporaries, in order that the response may be truly national and representative of all classes. The special inducement to subscribe quickly to this appeal lies in the fact that Christmas will bring the first distribution to the societies participating, so that the Press will be in reality providing a Christmas present to our sailors.

Memorial Window at Castle Eden.

A window has been unveiled in Castle Eden Church to the memory of the late Captain Rowland Burdon, R.F.C. The theme is taken from the 33rd chapter of Deuteronomy: "The Eternal God is thy refuge, and underneath are the everlasting arms." The central figure is the Saviour with uplifted arms in the sky, and kneeling below are two angels holding the scroll, the family crest being in one corner of the window and the badge of the R.F.C. in the other. The window is the work of Messrs. Powell and Sons, the glass having been specially made by them. On the window-sill below is a tablet in stone, with a border of the R.F.C. colours in mosaic.

New Cantilever Bridge Across the Ohio.

A forward step in the development of bridge-erecting methods was recorded when on May 10 the suspended span of the new cantilever bridge across the Ohio River at Steubenville, Ohio, was swung. This single-track steel bridge, 1,120 ft. long and 110 ft. deep over the main piers, was erected complete by two locomotive cranes operating on a central track placed as the erection proceeded. Another special feature of the construction, which marks a departure from common methods, is seen in the use of hydraulic jacks instead of wedges and screws for the final adjustment in swinging the suspended span for closure.

A Family Shelter against Air Raids.

According to the "Star," a family shelter has been constructed at Wellmeadow Road, Hither Green. It was built by Mr. W. T. Knott, a builder of Hither Green Lane, for a neighbour, and will hold thirty people. It is 30 ft. long outside and 8½ ft. wide. It is sunk about two feet below the surface of the ground and has a concrete floor. The walls are about 3 ft. 6 in. thick. The roof is composed of steel girders, crossways, and filled in with reinforced concrete. Above that are sandbags 2 ft. 6 in. in depth. For ventilation there are four 1¼-in. pipes level with the ceiling and one 4-in. pipe in the bottom. There is a steel door for the entrance, with another steel door on the inner side of the wall. It is fitted up with electric light and seating accommodation. It is finished inside and out with cement.

Electrolytic Injury to a Copper Roof.

The greater part of the roof of the Library of Congress, Washington, U.S.A., is covered with tinned sheet copper, all of which is from the same manufacturer, and was installed at the time of the completion of the building in 1893-4. This has undergone a curious corrosion process which presents some unusual features, and has been investigated by P. Merica and reported on in Technologic Paper No. 90 of the Bureau of Standards. The roof is situated in a district uncommonly free from smoke, and it is not near any power station or factory producing smoke, so that atmospheric conditions may be regarded as most unfavourable for corrosion. Nevertheless, the sheet has become badly pitted on the upper side, and the pits occur in general along the line of surface scratches. They are apparently unrelated to the service conditions and to the direction of the rolling of the sheet. When the copper became exposed, as in the present case, at the bottom of the scratches on the surface, it formed a galvanic couple with the alloy layer, electrolytic action set in, and the copper at these points was corroded, forming the pits described. This publication gives the results of a study of the structure of the tin coatings on copper, and it is shown that this coating consists of at least three layers, viz., a thin layer of Cu_3Sn im
ately next the copper, then a layer
constituent "H," containing about 6
cent. by weight of tin, and finally a
of the eutectic of tin with copper.
alloy layers are electronegative, bo
the tin and the copper base.

Irish Granite Industry.

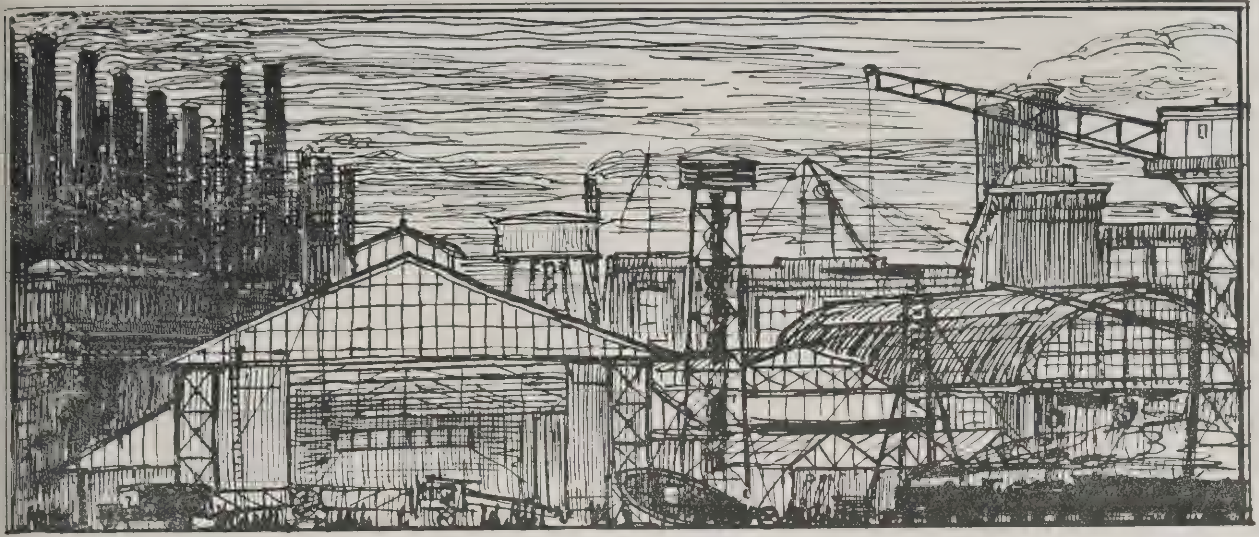
Steps are being taken to federate t
terests of those engaged in the g
industry in Sandyford and Glenculle
tricts. The object is to establish c
depôts to which the various quarry-o
would be able to send the finished
and from which, by the adoption
proved transit, supplies could be
expeditiously and satisfactorily del
where required. Preliminary me
have been held of the interested p
and it was proposed to inaugurate th
ject at a meeting to be held at the Ca
Library, Sandyford. The examp
Sandyford may lead to its extensi
other places. It is stated that th
moters have secured the co-operati
influential residents, clerical and l
well as representatives of every ph
the architectural and building profes
and the Lord Mayor of Dublin signifi
intention of being present at the ina
meeting.

University College Lectures on
Health and Town Planning.

Three public lectures, arranged i
nection with the Chadwick Departme
Municipal Engineering and Hygien
the Department of Town Planning,
held at University College, London,
lows: Thursday, October 18, at 5.30
"The Effect of the War on Mu
Engineering and Public Health," b
H. Percy Boulnois, M.Inst.C.E.
man: Sir Maurice Fitzmaurice, C.
Thursday, November 1, at 5.30
"Sanitary Work in the Army," by
Arthur J. Martin. Chairman: The
Sir John McCall, M.D., LL.D.,
General for Tasmania. Thu
November 15, at 5.30 p.m., "
General Aspects of Town-Planning
the War," by Professor S. D. Ad
F.R.I.B.A. Applications for ticke
companied by a stamped addressed
lope, should be addressed to the Sec
University College, London (
Street, W.C.1).

Durham Cathedral: Reopening
Great Western Doorway.

A great change has been made
appearance of the interior of D
Cathedral by the reopening of the w
doorway. Originally this was the
entrance to the cathedral, but, on th
tion of the Galilee Chapel at the we
by Bishop Pudsey (1153-94), the p
principal entrance on the north sid
erected by the same prelate, and b
the main doorway. It is stated tha
the days of Cardinal Langley, early
fifteenth century, the great double w
door has been opened only on specia
sions, the last being the memorial
for the late Queen Victoria. N
would appear, the intention is to ke
door permanently open. The res
that the western extremity of the cat
hitherto rather gloomy, is now b
lighted from the Galilee Chapel, wh
vista along the aisles has been grea
tended, and the view into the
Chapel is an interesting one at
angles, especially those which reve
fine arcades of ornamented arches
the chapel.



WAR·BVILDINGS·SECTION

TIMBER TRUSS HANGAR ROOFS.

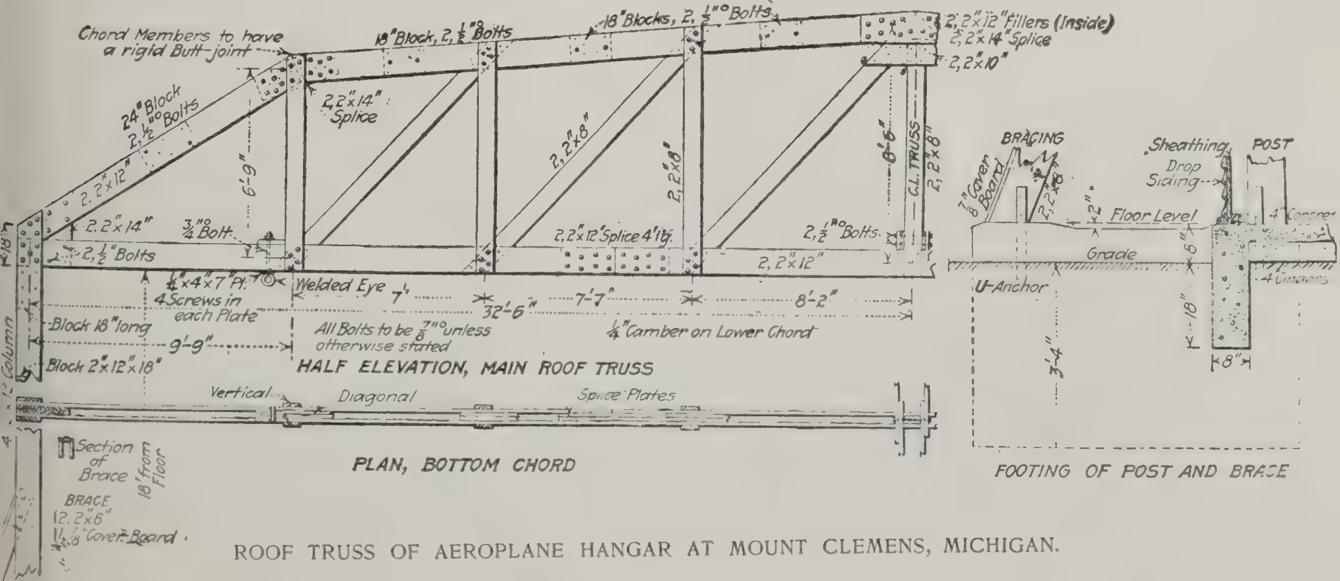
OF trusses of 66-ft. span, with no knee-brace connections to the ns, are used in the hangars or aerosheds of the Selfridge aviation camp Mount Clemens, Michigan. These must have all the clear space le, and knee-braces would have d obstructions. The necessary l stability is given, therefore, by outraces against the posts.

h post is made up of four 2-in. by planks, the two outer planks being ated 2 in. from the inner ones by s of spacing blocks. The brace conof two planks 2 in. by 8 in., having ends fitted between the planks of the and a $\frac{7}{8}$-in. cover board on the out- The posts rest on the concrete floor shed, and the braces on concrete gs as shown. The posts and trusses aced 15 ft. c. to c. The sheds are by 120 ft., widened to 81 ft. at the middle by a lean-to locker-room 15 ft. wide on one side. There is a 4-in. concrete floor on 4 in. of cinders, and the floor extends 3 ft. beyond the ends.

The roof trusses have all members composed of pairs of planks. The chords and end posts have 2-in. bv 12-in. planks spaced 4 in. apart so that their ends fit between the planks of the posts, as noted above. The web members are pairs of 2-in. by 8-in. planks, the diagonals fitting between the chord planks while the verticals are on the outside. The parts are put together with $\frac{7}{8}$-in. bolts and with nails. For slinging the aeroplanes there are $\frac{3}{4}$-in. eye-bolts in the bottom chord. Longitudinal struts are spiked against the middle posts of the trusses. Purlins 2 ft. c. to c., composed of pairs of 2-in. by 8-in. planks, rest on the trusses and carry the roof sheathing.

To facilitate moving the aeroplanes in and out of the shed, the entire cross-sectional area of the building (below the trusses) is made available by double pairs of timber rolling doors. These are carried by 9-in. grooved rollers running on 8-lb. rails anchored to the floor and end wall. They have Hyatt flexible roller-bearing bushings. The doors are guided by horizontal truck rollers at the middle and top. Those at the middle ride against friction strips on the doors themselves (as the panels overlap). Those at the top ride against the centre tongue of an overhead runway. To carry the doors clear of the building, these runways extend about 16 ft., their ends being supported by 8-in. by 8-in. posts, with 6-in. by 6-in. braces on three sides, as shown in accompanying illustrations, which at the present juncture are of peculiar value and interest.

These buildings were designed by Mr. Albert Kahn, architect, of Detroit.



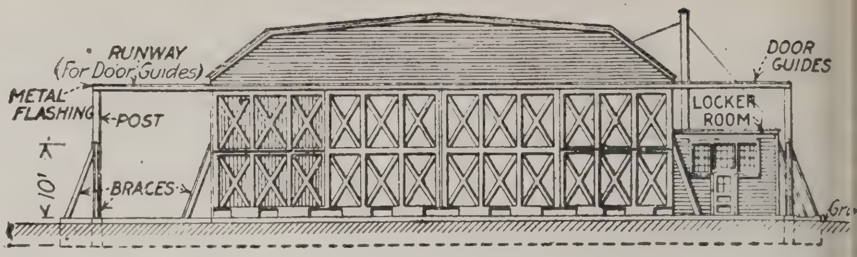
ROOF TRUSS OF AEROPLANE HANGAR AT MOUNT CLEMENS, MICHIGAN.

THE COMMITTEE ON WAR DAMAGE.

At a meeting of the Committee on War Damage, held at the Mansion House, London, on Friday, September 28, the Lord Mayor, Sir W. H. Dunn, who presided, submitted a report on behalf of the Committee of Three, viz., himself, Lord Parmoor, and Mr. Mark H. Judge, setting out their correspondence with the Government but regretting they were not yet able to report any definite progress. The report closed as follows: "We all know how occupied the Prime Minister must be, and, much as your committee regret delay in the preparation of the scheme which is to give effect to the new policy of the Government, we must wait in patience, and we trust we shall before long be able to submit the scheme to you."

On the motion of the Mayor of Tynemouth, seconded by the Vicar of Margate, the following resolution was passed: "That this meeting reaffirms the resolution passed at the meeting on August 3, and further agrees that the pronouncement made by the Prime Minister on July 13 last affords a satisfactory solution of all questions connected with compensation for damage by air raids and bombardment."

The Lord Mayor of York then proposed: "That this meeting desires our Committee of Three to meet the body authorised by the Government forthwith in order that a practical scheme to carry out the principle accepted by the Prime Minister may be formulated at the earliest possible time." The Mayor of Harrogate seconded this, and it was supported by Sir William Chance, Sir Henry Kimber, Sir Richard Stapley, Sir Robert H. Rogers, Alderman A. F. Dod, and the Mayor of Ramsgate. The resolution was passed unanimously, and, on the motion of Mr. Judge, a cordial vote of thanks was accorded to the Lord Mayor.



AEROPLANE HANGAR AT MOUNT CLEMENS, MICHIGAN: END ELEVATION.

HOUSING MOVEMENTS.

Lancaster.

Lancaster R.D.C. is prepared to spend £100,000 on houses for the working classes.

Tipton.

Tipton Council have confirmed a report recommending the appointment of a sub-committee to consider the question of housing and to formulate a scheme to be placed before the Local Government Board with a view to getting a Government grant.

Duke of Buccleuch's Estate.

The Duke of Buccleuch has approved a movement for providing improved dwelling-houses for working people on his estate. He is prepared to assist the Dalkeith councillors in every way possible in providing building sites should such be required on lands belonging to the Buccleuch estate at Elmfield Park or elsewhere.

Bristol.

In Bristol the shortage of houses of small size has become notorious, and the State announcement gave urgency to the consideration of the question. The result was a long report, making it clear how great was Bristol's need, and as a step towards meeting the shortage, the Council undertake "to prepare at once a scheme for the erection of 2,000 workmen's dwellings, to
be erected at the conclusion of the w
the understanding that the Goverr
will afford the Corporation substantia
satisfactory financial assistance."

Rehabilitation of the Basement.

The basement house has come
favour again. After having been reg
as obsolete for years, basements are n
a premium. A house agent in the
Central district told the "Evening N
that he wished he had basement hou
let. This is the first advantage the
ment house has had for years. Top
flats have now become the despised "
ing-place."

500 *Houses for Halifax.*

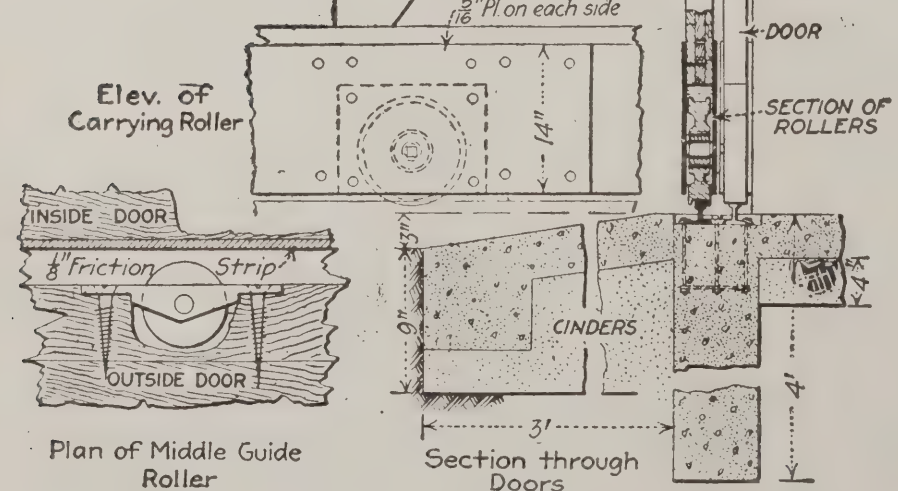
An interesting development in the
tion of municipal housing at Halifa
decision of the Housing Sub-Com
that their scheme for the erection aft
war of eighty-six houses shall be sub
to the Local Government Board as th
instalment of a scheme for five hu
houses. The whole matter, howeve
pends a good deal on the attitud
central authority adopts towards h
schemes, it being very definitely
stood among members of the Halifa
poration that their proposals will b
ceeded with only if substantial fin
assistance is forthcoming from the G
ment. The type of house sugges
Halifax contains a large living-ro
scullery with bath, and three bedr
There will be no cellars, but adequat
veniences will be provided in back
Wherever possible the houses will be
a south aspect. On this side, too,
will be a large garden. The esti
cost, including land, is £320 per hous

Newport (Mon.).

At a meeting of Newport Corp
Housing Committee a letter was rea
the Local Government Board inq
what the local authority was doing
matter of housing. In reply, it was
that the Town Council had in han
vious to the outbreak of the war a
for the construction of 500 houses
Somerton estate and elsewhere, to
at weekly rents ranging from 7s. t
Consequent upon the extensions of
industries, as well as the establishm
new ones, a demand had arisen for a
sand new dwellings. It was state
that the contemplated tenements at
week could not be proceeded with
view of the great advance in the
labour and materials. A strong
taken of the situation was that so
traneous financial assistance would
quired for any housing scheme
would be embarked upon.

Spenborough, Yorks.

The Spenborough District Counc
decided to make a representation
Local Government Board with refer
the need of workmen's houses in t
trict. The question had been cons



AEROPLANE HANGAR AT MOUNT CLEMENS, MICHIGAN: DETAILS OF CONSTRUCTION.

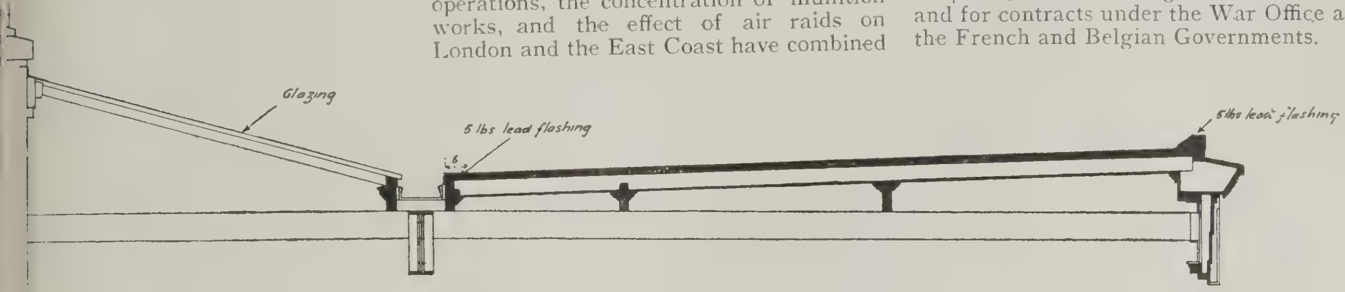
Housing and Town-Planning Com- , who had come to the conclusion 00 houses are required now, that 200 will be required at the end of the war, at there is no likelihood of their provided by private enterprise or utility societies. With regard to e, they were of opinion that the Government Board should accept sibility for the difference between the r and present cost of materials and , and subject to satisfactory financial ements they recommended the il to say that they were prepared to t a scheme for the provision of 300 s, for which it was thought it would acticable to obtain suitable sites by nent. After a short discussion the il approved the recommendation t dissent, and the representation will lingly go forward at once.

ivate Enterprise" and Housing Problems.

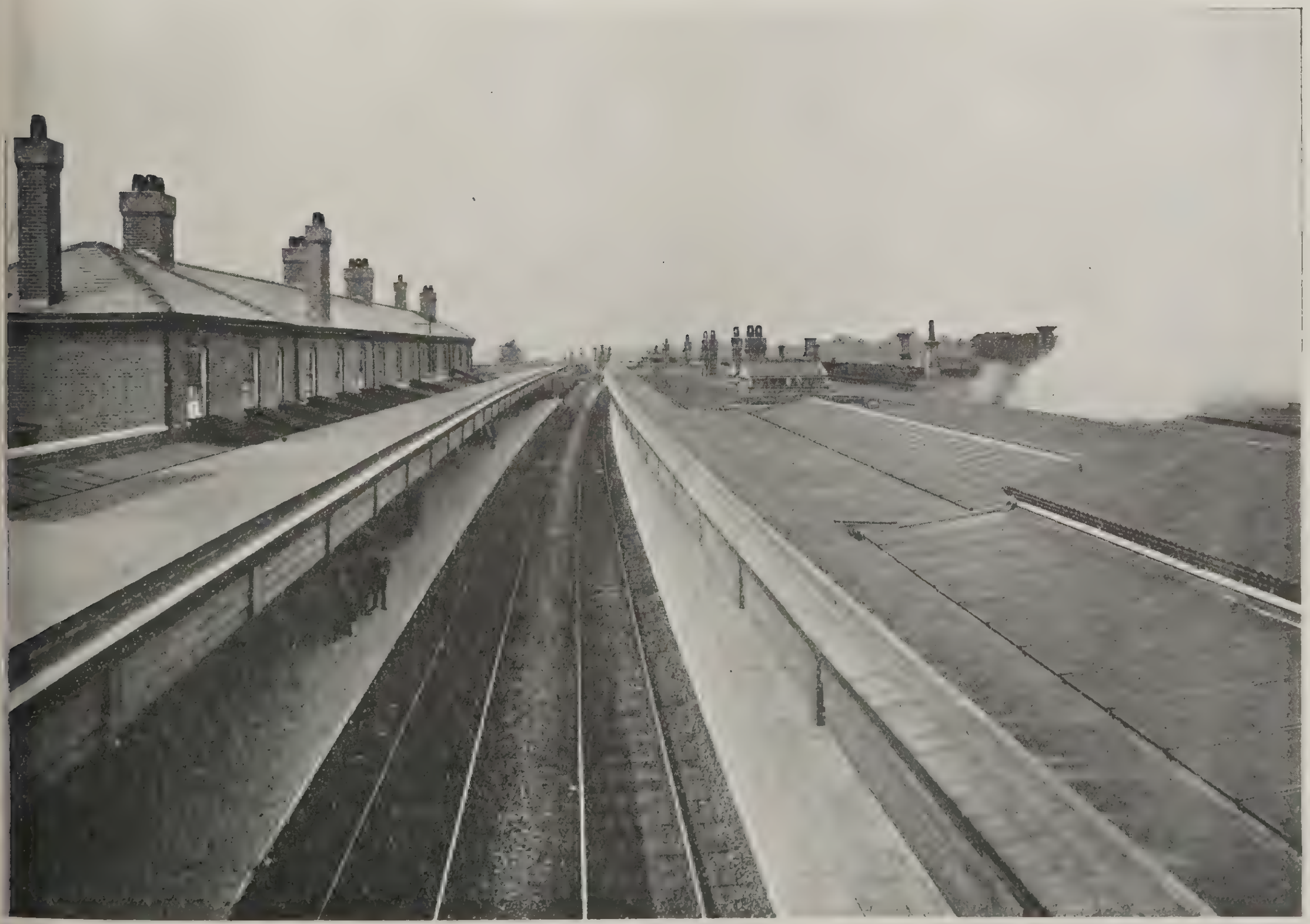
neeting at Liverpool of property- s and private builders on Septem- marked the opening of a campaign to be organised in defence of the rights of "private enterprise," with especial reference to the housing question after the war. The Reconstruction Ministry contemplates extensive schemes of house-building on national-cum-municipal lines as part of its after-war programme. Moreover, the Local Government Board are requiring local authorities throughout the country to send in complete returns as to the housing accommodation required in urban and rural areas and the municipal housing schemes already projected. The building trade (says a writer in the "Manchester Dispatch") is not unnaturally perturbed by the prospect of unlimited competition, backed by the taxpayers' and ratepayers' money, and to defend the interests concerned—interests which represent a capitalised value of many million pounds—there has now been formed a national Federation of Housebuilders. The Liverpool meeting will be followed up by an extension of the defence campaign throughout the country, and at a later date by an important conference in London. Meanwhile, the stoppage of private building operations, the concentration of munition works, and the effect of air raids on London and the East Coast have combined to create an extraordinary congestion in the matter of housing in the Midlands and Home Counties.

ROOFING A RAILWAY STATION.

The illustrations reproduced on this and the following page show the roofs of a certain railway station recently covered by Messrs. Vulcanite, Ltd. The roofs are constructed of Vulcanite materials used in connection with one of the firm's new specialities—a system of roofing which has been adopted at a number of railway stations. We understand that the Vulcanite Company have supplied, to the orders of the Government, and for use in buildings under the control of the Food Department and the Ministry of Munitions, large quantities of their various roofing specialities, which are singularly well adapted to the requirements involved. The materials supplied include Vulcanite sheet asphalt, Leatherite felt, and Rexilite roofing, the last-named having been used to a very large extent for military hutments and hospitals, both in England and abroad, and for contracts under the War Office and the French and Belgian Governments.



TYPE SECTION



A RECENT EXAMPLE OF RAILWAY STATION ROOF CONSTRUCTION.

HOUSING IN SCOTLAND.

The report of the Royal Commission on Housing in Scotland has just been published. The Commissioners have examined the position so thoroughly that their observations and recommendations alone fill a very bulky foolscap volume. They were appointed to inquire into the housing of the industrial population of Scotland, rural and urban (with special reference in the rural districts to the housing of miners and agricultural labourers), and to report what legislative or administrative action was, in their opinion, desirable to remedy existing defects. The inquiry has lasted nearly five years, although the meetings have been infrequent during the war. Even so long ago as the spring of 1914 questions were asked in Parliament as to the probable date when the report would appear. The general conclusions of the Commission are not in doubt. Shortage of proper housing in both urban and rural districts in Scotland as in England is a notorious fact calling aloud for remedy. Interest in the report will centre upon the detailed recommendations regarding schemes of building to be undertaken by the local authorities with substantial financial assistance from the Government. It cannot be said that the delay in submitting proposals is likely to interfere with the prosecution of a national scheme of housing. Substantial progress cannot be made till after the war, and even then the work may be retarded by the scarcity and dearness of building material and the urgent need of supplies in France and Belgium for the rehabilitation of the devastated portions of those countries. This difficulty, however, will be overcome to some extent by the measures to be devised by the Committee of the Reconstruction Ministry for securing to the Allied countries adequate supplies of raw material during the time of shortage and abnormal demand which must follow upon the declaration of peace.

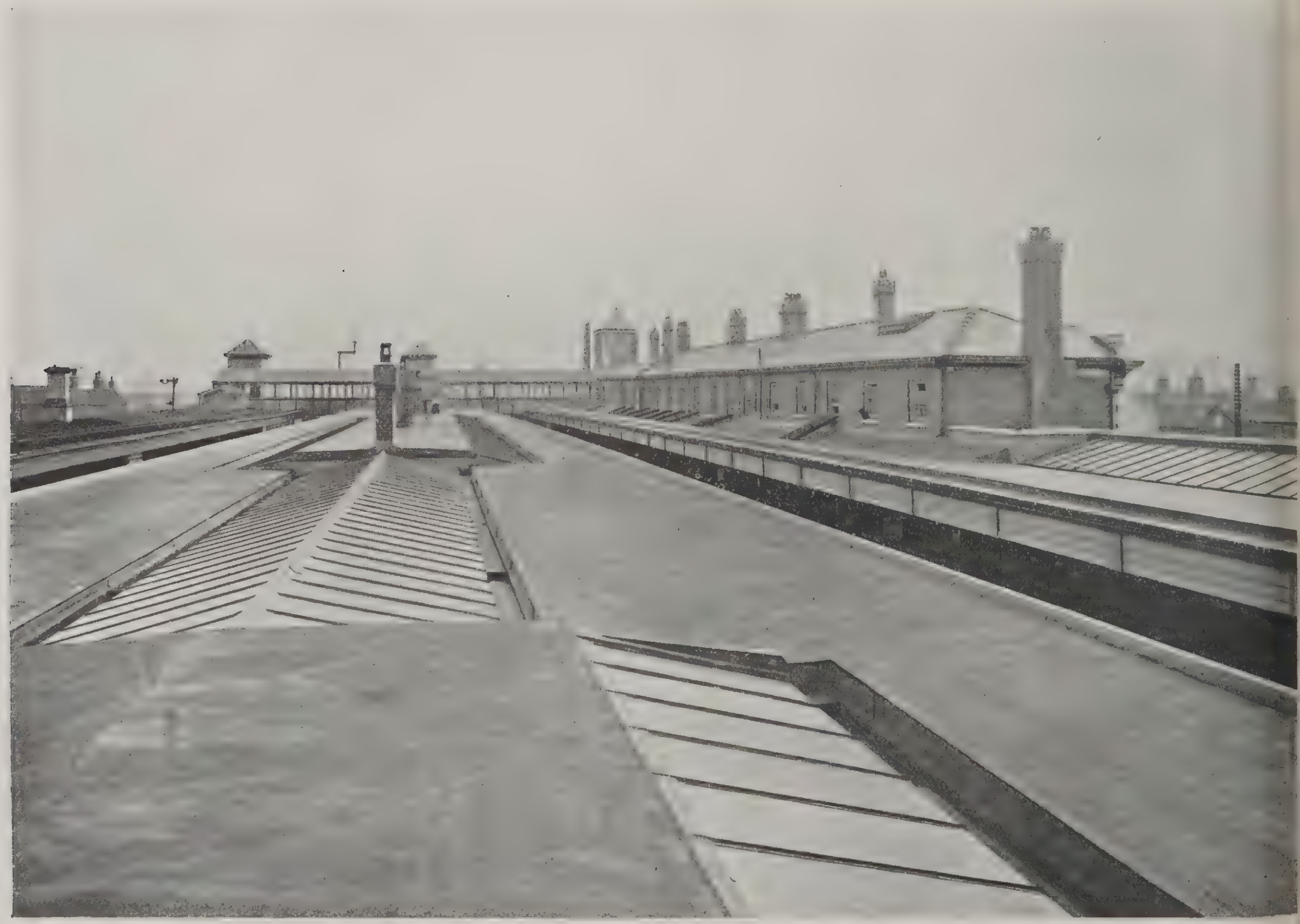
Glasgow Corporation Housing Schemes.

The minutes of the Special Committee on Housing and General Town Improvement submitted at the meeting of Glasgow Corporation state that there was submitted a circular letter from the Secretary to the Local Government Board relative to the provision of houses for the working classes after the war, intimating that the Board were authorised to say that the Government recognised that it would be necessary to afford financial assistance from public funds to local authorities who were prepared to carry through, without delay at the conclusion of the war, a programme of housing for the working classes approved by the Local Government Board, and forwarding a schedule to be filled up by the local authority as to the housing needs in their area. The Town Clerk explained that on receipt of this letter he had forwarded a print of it and of the schedule referred to to the various interested officials of the Corporation, for the purpose of obtaining the desiderated information as regarded their respective departments. The committee instructed the Town Clerk to fill up the schedule and to submit it to them.

The Town Clerk reported to the same committee in connection with the decision of the Corporation to erect tenements at Garngad Road that, as instructed, he had on July 9 made immediate application to the Secretary of the Ministry of Mu
for permission to proceed with
housing scheme, but had received no
to that letter and two subsequent lett
dates August 1 and September 3.
committee expressed their disappoin
at the unaccountable delay on the
the Government in dealing with the
request made, and agreed to ask the
Provost to communicate with the M
of Munitions.

ARCHITECTS AND REORGANISATION AFTER WAR.

A committee known as the Arch
Re-organisation Committee, represen
of all the architectural societies b
London and the provinces, has bee
pointed to prepare schemes for th
organisation of the architectural p
sion after the war. In its deliberati
has particularly in mind the welf
architects at present on war servic
those whose practices have been des
by the war. The committee propo
issue from time to time reports an
gestions for dealing with various pro
which will arise in connection with th
fession upon the demobilisation
forces, and hopes that as a result
work the re-establishing of archite
practice after the war will be faci
and the position of the professio
proved generally. The joint hon.
taries of the committee are: M
Macarthur Butler, secretary of the S
of Architects; and Mr. F. R. Ye
secretary of the Architectural Associa



A RECENT EXAMPLE OF RAILWAY STATION ROOF CONSTRUCTION.

DEN HOUSES FOR FRANCE.

or Ernest McCullough, chief engi- f the American Red Cross in Paris, ibuting in America sets of drawings pecifications for temporary wood to be built in the destroyed region nce. These projects are in charge Ministère de l'Intériure, and inqui- garding them should be addressed to partment in Paris.

Government of France is now pre- for reoccupancy of the districts ted by the Germans, and, as is well , practically all of the cities have to uilt. For the temporary shelter of turning residents, however, small rame houses are provided. These nerally of a take-down type, which pped in cut and fitted pieces to be l on the site. Such houses, of four nt types, are illustrated in detail in ficial drawings, and it is Major lough's opinion that American acturers may be able to go into the ss of making them.

cost of the houses is about 250 dols. om delivered at a port in France, which they will be carried by the ment to their destination. On ac- of short freight cars the maximum sible length of any piece is 6 m., or . Hundreds of houses have been and thousands will be required. now built in France and Switzerland green lumber, not always of the best . Furthermore, it is extremely t now to get timber in France over 10 in. in section. Anything larger as, been taken by the armies.

Society of Friends of England is gaged in this reconstruction work, s factories where these demountable are built.

HE TOWN WALLS OF CARNARVON.

town walls of Carnarvon have been lt round with houses of various that for the most part they are only ly visible and quite inaccessible to eral public. At Conway, where the is the property of the Corporation, wn Council some years ago took e steps to free the town walls, like those at Carnarvon, were then by houses, with the result that the y town walls are now almost hout their circuit accessible to the

is election to the mayoralty of Car- two years ago Mr. Charles A. the present Mayor, who is also -Constable of the Castle under the Minister, pledged himself to do all d to recover for the town possession town walls. His first step in this n was to obtain from Mrs. Brenton, er of the late Sir John Puleston, oyd George's predecessor as Con- of the Castle, possession of the n Tower, situated at the bottom end ngate Street, of which Mrs. Brenton owner. On Mr. Jones's sugges- rs. Brenton presented the Puleston to the town as a free gift, in y of her late father. The tower was resented to the Government, who ok the care of it under the Ancient nents Protection Act. Following e Mayor took measures to secure quisition of the adjoining tower, at the Castle Square end of Greengate Street, as well as of some old houses which had been built against this portion of the town walls, which hid from view the beautiful old gateway through the wall known as the Greengate—one of the old entrances into the town, which was in the old days approached from The Green (now Castle Square) outside the walls by a flight of stone steps.

This second step towards his ultimate object the Mayor was fortunately enabled to take through the generosity of Mr. Owen Jones, of Glanbeuno, who, having purchased the old houses already mentioned, presented them to the Town Council. This also was conveyed to His Majesty's Office of Works, and the old houses are now in course of demolition. The two houses hiding the town wall at the Castle Ditch end of Hole-in-the-Wall Street, on the other side of the wall now being revealed, will also be demolished.

All these improvements will be effected without any expense to the public, and the exposure of the old wall and the old gateway will be a marked addition to the attractiveness of the town.

NEW CHURCH AT EDGBASTON.

St. Germain's Church, City Road, Edgbaston, which has just been consecrated by the Bishop of Birmingham, is an offshoot of St. Augustine's, and will provide accommodation for about 630 persons in a large and ever-growing district. It is remarkable for at least three reasons—first, the generosity of churchpeople in the parish enabling a building which has cost £8,400 to be opened free of debt, though needing considerably more money to complete the furnishing, decoration, and equipment; secondly, in being built during the war, with all the difficulties this has entailed; and, thirdly, the quiet beauty of its design. Another noteworthy fact is its naming after a famous French soldier-bishop. The site of the church was given by the Gillott trustees conditional on the building being dedicated in 1917. A start was made by cutting the first turf in 1915, the foundation-stone laying with Masonic honours took place in July of the same year, and now the building has been consecrated and is placed under the care of the Rev. Albany Clarke, in the absence of the curate-in-charge (the Rev. R. M. Gibson), now officiating with the army abroad.

The architectural design of the church is developed from the Early Christian type of basilica, such as was built in Italy and the East when Christianity first became widely spread, and in many ways this type is specially suitable for modern congregational worship. The nave is of lofty proportions and extends six bays in length, its columns being monoliths of red granite. The roof is of massive timbers, colour decorated, and it is intended to decorate the aisle roofs in a similar manner. A morning chapel and organ chamber open to the sides of the chancel with arcades, the shafts of which are green marble monoliths, with carved white marble caps and bases. The altar stands in an apse covered with a concrete semi-dome, and it is hoped to clothe the walls with marble panelling, and the semi-dome with mosaic. The font, of carved stone and marble, has been given by the children of the parish. Externally the character of the building is broad and simple, the decorative treatment being a varied use of brick and stone. The roof is covered with Italian tiles, and is surmounted by a bell-turret of teak with a lead-covered dome. The architect of the church is Mr. Edwin F. Reynolds, and Messrs. Collins and Godfrey, of Tewkesbury, are the builders.

OBITUARY.

Councillor J. Townsley, of Hull.

Councillor James Townsley, who died at his residence, "Wavertree,". Westbourne Avenue, Hull, on October 2, after a long illness, was the managing director of the firm of Dawber, Townsley, and Co., Ltd., slate importers and contractors, the founder of the National Federation of Slate Merchants, and the honorary editor of the "Slate Trade Gazette." He had occupied the presidential chairs of the Yorkshire Federation of Building Employers and the Hull Master Builders' Association, whose headquarters are in the Metropole Halls, a large building in West Street of which he was sole proprietor. He always took a keen interest in the public affairs of his native city, and when, on the retirement of Mr. Fred Craft last year, a vacancy occurred on the Hull City Council, he was readily elected a member. Mr. Townsley's interest in religious and philanthropic work was well known in the East Riding. He was ex-chairman of the Congregational Board; he was once president of the National Commercial Temperance League; and the beautiful lawn at "Wavertree"—at one time the playing ground of the Hull Lawn Tennis Club—has, in recent years, been the scene of scores of garden fêtes in aid of social and charitable institutions.

Mr. Richard Kerrison, Builder.

The death has occurred at Southwick, Sunderland, of Mr. Richard Kerrison, aged sixty-eight years, a well-known builder and contractor. He did much work for the North-Eastern Railway Company and the Durham County Education Authority, and had much to do with the development of the residential parts of Southwick. For some years he was a member of the Southwick Urban Council.

A DANGER OF SAND PITS.

At the Church Room, Seamer, the North Riding Coroner, Dr. J. F. Porter, held an inquiry into the death of Thomas Herbert Dobson, aged thirty-four, who was suffocated by a big fall of sand whilst he was working at the Musham Bank Sand Pit, between Scarborough and Seamer. Mr. J. W. Read, clerk, and Mr. J. A. Iveson, surveyor to the Scarborough Rural District Council, represented that body.

William Dobson, road foreman at Ayton, said they were throwing sand out for a cart, when the top came in. Replying to the coroner, witness said he was quite sure they had not penetrated too far. Witness had been quarrying for thirty-five years. When the top came in deceased was smothered before he could be got out.

The Coroner remarked that so far as he could see sand-pits did not come under any law.

John Furness, another workman, said they had penetrated fully a yard from the face when the accident happened.

J. A. Iveson, the surveyor, said he took it that each man was responsible for the work he did in the pit. He sent his men to get sand, and builders from Scarborough did the same.

The Coroner said they wanted to know

what steps were taken for the protection of the workmen by those who employed them.

Witness said he did not think the man had any special instructions. They were all practical men and knew more about sand quarries than he did. There was no bye-law of the Council affecting the matter.

The jury returned a verdict that deceased was accidentally smothered by a fall of sand. They added a rider that they were of opinion that some steps should be taken by the proprietor of the sand-pit to protect men whilst working in the pit.

The Coroner said he agreed with the rider.

A REORGANISED COMMERCIAL INTELLIGENCE DEPARTMENT.

A memorandum issued by the Foreign Office and the Board of Trade includes the following provisions, which have received the sanction of the War Cabinet:—

An enlarged Commercial Intelligence Department will be created on a scale adequate to meet the reasonable requirements of British trade after the war. Parliamentary control over the department will be exercised through a new Parliamentary Secretary who will occupy the position both of Additional Parliamentary Secretary at the Board of Trade, and also of Additional Parliamentary Under-Secretary for Foreign Affairs. This Parliamentary Secretary will be responsible to the President of the Board of Trade for all matters within the competence of that department, and responsible to the Secretary of State for Foreign Affairs for all matters concerning the Foreign Office. By matters concerning the Foreign Office is meant all questions concerning the direction and organisation of the Commercial Attaché and Consular services and the commercial work of officers of these services and of the Diplomatic service, so far as these matters are not dealt with by the Consular or other departments of the Foreign Office, and also matters concerning the personnel of the Foreign Office and of the above services who may be temporarily attached to the department, and any matters arising out of the work of the department involving questions of foreign policy. All instructions issued to Commercial Attachés or other Diplomatic or Consular Officers will be issued in the name of the Secretary of State for Foreign Affairs. On all other matters the responsibility will lie with the Board of Trade.

The Commercial Intelligence Department will eventually comprise the existing Department of Commercial Intelligence of the Board of Trade and the Foreign Trade Department of the Foreign Office, and will take over such of the staff and records of the War Trade Intelligence and Statistical Departments as may be available and required.

The official head of the Department will be an officer appointed jointly by the President of the Board of Trade and the Secretary of State for Foreign Affairs, working under the new Parliamentary Secretary. The appointment and control of the Trade Commissioners within the Empire will, as at present, rest with the Board of Trade, and the appointment and control of the Commercial Attachés and Consular Service with the Foreign Office, but the work of the new department will comprise all matters dealing with commercial intelligence, and, so far as is necessary for that purpose, it will give directions to the oversea services and make the necessary arrangements for keeping them in close touch with the commercial classes in this country.

There will be a constant interchange of staff between the department and both the Foreign Office and the Board of Trade, so that members of those departments may be thoroughly acquainted with the work. Opportunity will be given to diplomats and Consuls in training to serve for a period in the department. It will also draw personnel from the Commercial Attaché and Consular Services, and from men of outside business experience. In the same way officers of the Trade Commissioner Service will be trained in the department and will be attached to it from time to time.

The department will be assisted by an Advisory Committee of business men, and it is hoped that it will be possible to arrange for a sub-committee of this committee to meet at frequent intervals in order to advise the department on its current work.

TRADE OPENINGS IN CANADA AND NEW ZEALAND.

Canada.

The office of H.M. Trade Commissioner in Canada reports that an agent of Montreal, a British subject who has been six years in the Dominion desires to get into touch with United Kingdom manufacturers of builders' hardware, tiles, sanitary fittings, etc. with a view to obtaining agencies for the Provinces of Ontario and Quebec. United Kingdom manufacturers of the goods mentioned, desirous of appointing an agent for the Provinces referred to, may obtain the name and address of the inquirer an application to the Department of Commercial Intelligence, 73, Basinghall Street, E.C.2. In making application the reference number (317) should be quoted. The following inquiries have been received at the offices of the High Commissioner in London for Canada, 19, Victoria Street, S.W.1, whence further information may be obtained: A Toronto firm asks to be placed in touch with United Kingdom manufacturers of black sheets, tinplates and steel and brass tubing (brazed, lapwelded and seamless). A Winnipeg firm inquires for names of United Kingdom manufacturers of bedticking or mattress covers and cotton laundry cloths used for covering steam-heated rollers.

New Zealand.

H.M. Trade Commissioner in New Zealand reports the receipt of the following inquiries: A firm of agents established in Dunedin, Auckland and Wellington, is desirous of obtaining agencies for United Kingdom manufacturers of brassfoundery suitable for cabinet makers and builders. This firm claims to have five travellers touring throughout the Dominion, and calling upon architects, builders, joiners, cabinet makers, ironfounders, engineers, etc. (reference No. 324). A firm of bar-iron merchants at Christchurch desires to obtain the representation, preferably on a commission basis, of British hardware houses dealing in high quality goods, so that it may sell British products in conjunction with sales of bar iron. This firm claims to be largely interested in iron-rolling mills in New Zealand, to have several capable travellers covering both the South and the North Islands, and to have already an important clientèle; the firm also claims to have business relations w
number of public utility services (
ence No. 325). A gentleman in New
land who is at present employed by a
firm having connections with hard
builders' merchants, and general h
throughout the whole of New Zealar
prepared, if suitable opportunity offe
consider taking up agencies for U
Kingdom manufacturers of lines v
will appeal to such houses (reference
326). United Kingdom brassfoun
hardware houses, etc., desirous of
represented in New Zealand, may i
case of the first two inquiries obtai
names and addresses of the respectiv
quirers on application to the Depart
of Commercial Intelligence, 73, Basin
Street, London, E.C.2, while in the
instance firms wishing to commu
with the inquirer should address
Trade Commissioner for New Zea
P.O. Box 369, Wellington.

Builders' merchants and man
turers will find it advantageous to k
watchful eye on the announcemen
business openings issued from tim
time by the Department of Comm
Intelligence.

LECTURE COURSES.

*London County Council School
Building, Ferndale Road, Claph*

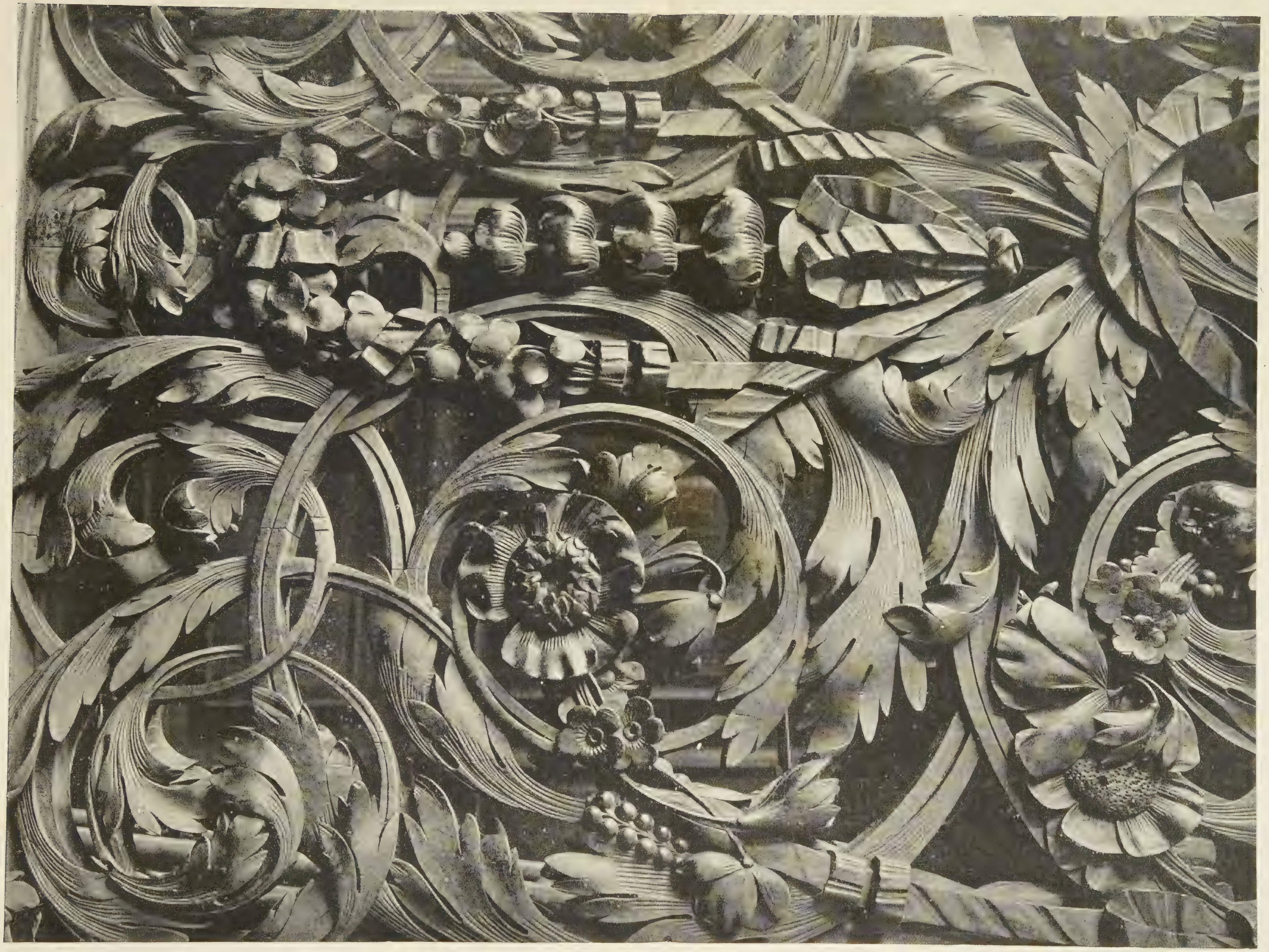
The success of the course of lectur
the buildings of Italy, delivered on
day evenings at the above schoo
April and May last, by Professor
ford Pite, F.R.I.B.A., has encourage
Council to arrange a further series f
Michaelmas (1917) and Easter
terms. The lectures will be known
general title of "Town Planning
Architectural History," but new and
comprehensive matter will be intro
as the course develops; whilst addi
facilities for students will be provid
their requirements are ascertained.
Council again grants the special pri
of free admittance to teachers in its se
and they will find the series of consid
advantage to them. The opening le
was delivered on Tuesday, Septemb
commencing at 7.30 o'clock p.m.

*University of London: Universi
College.*

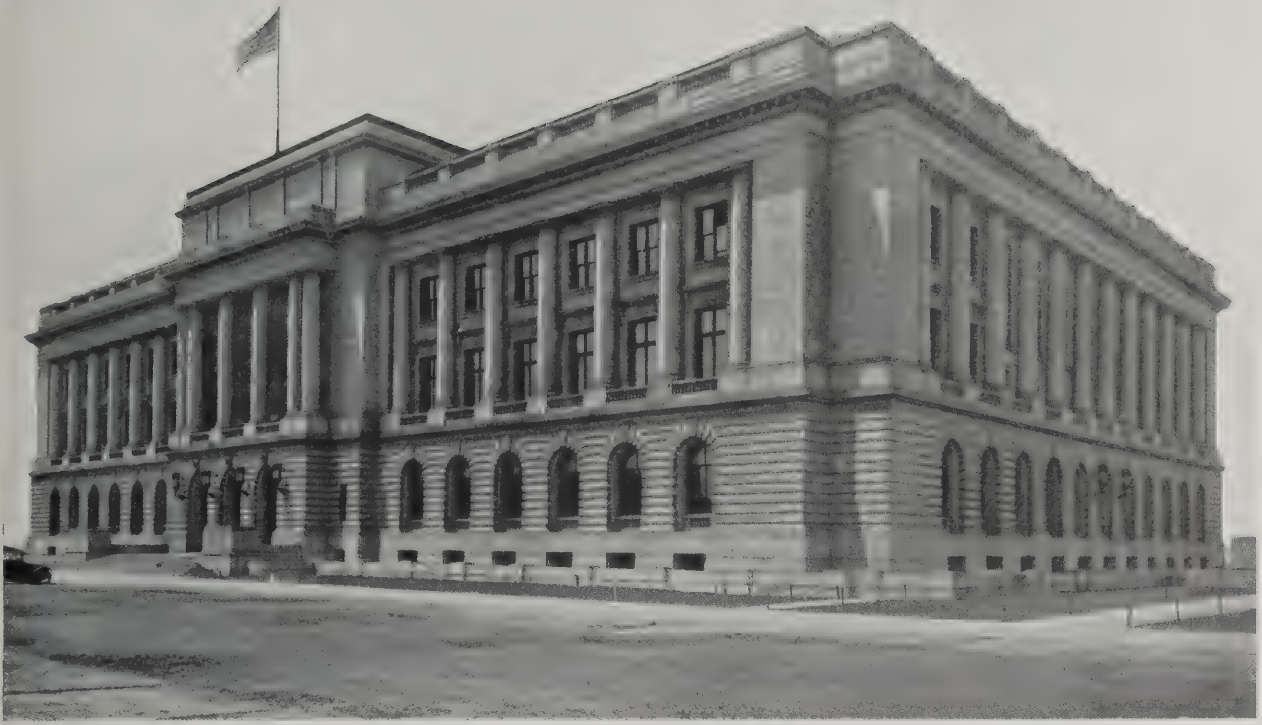
In the Sub-Department of Heatin
Ventilating Engineering a public intr
tory lecture will be given by Mr.
Barker, B.A., B.Sc., Whit.Sch., in
Physiology Lecture Theatre of Univ
College, London, to-night (October
7 p.m., on "The Engineering Pla
Large Hotels." Full particulars of
courses in heating and ventilating
neering may be obtained on applicat
Mr. Walter W. Seton, M.A., D
Secretary, University College, Lo
Gower Street, W.C.1.

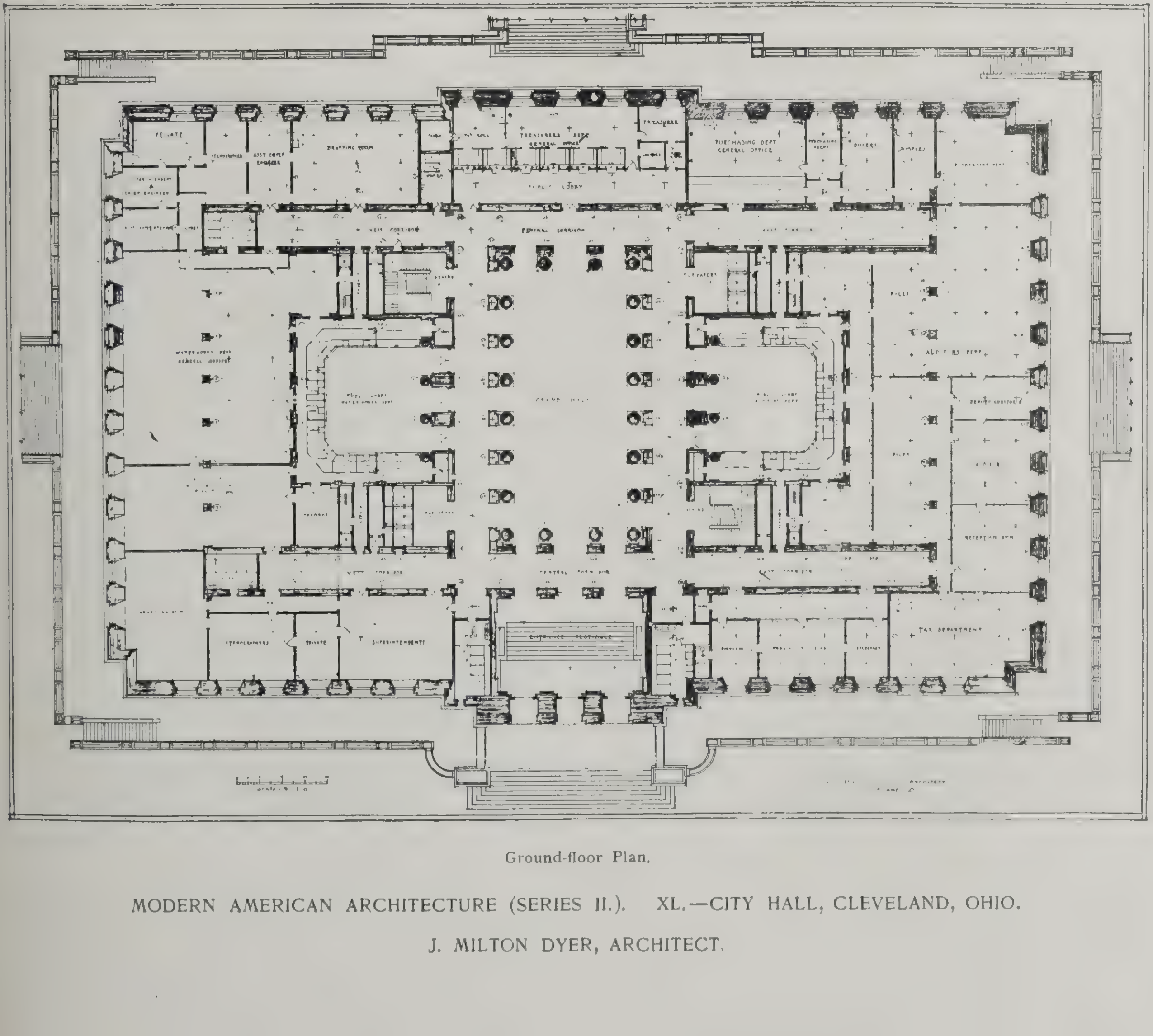
"Generals of the British Army.

Mr. Francis Dodd, who holds a co
sion as second-lieutenant, has been
special facilities by the War Office to
a series of portraits of British gen
and Part I. of the series, price 5s. n
now published. Most of the sittin
connection with the present number
obtained in France, and the drawings
extraordinary fidelity and vigour.
complete the work will form a most
able souvenir of the great war. "Ge
of the British Army" is published f
Government from the offices of "Co
Life," Ltd.



DETAILS OF CRAFTSMANSHIP (SERIES II.). XLII.—DETAIL OF CARVED SCREEN IN THE CHAPEL OF TRINITY COLLEGE, OXFORD.

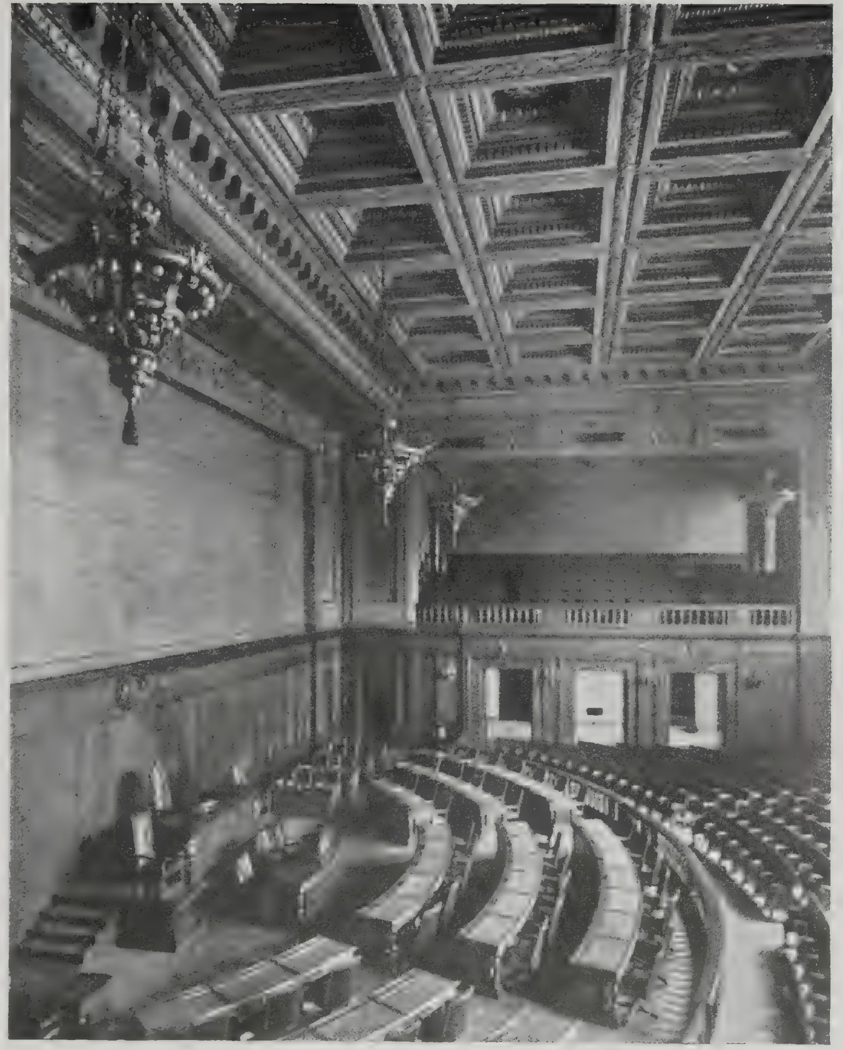




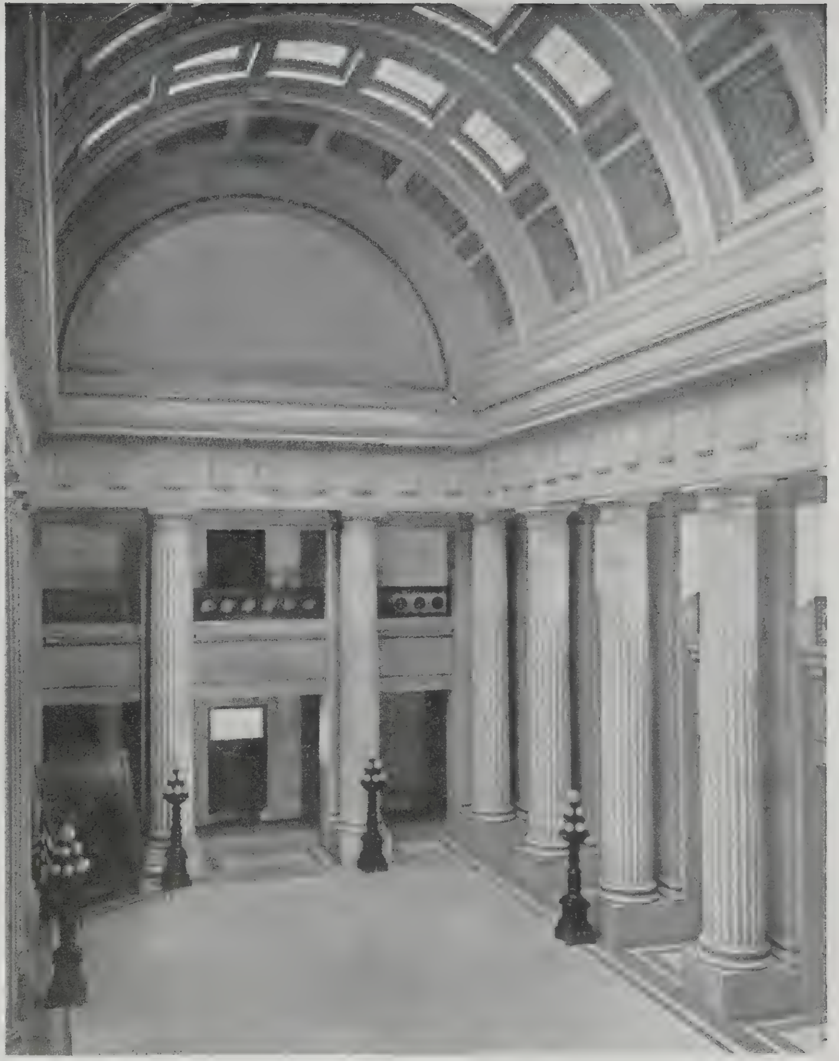
Ground-floor Plan.

MODERN AMERICAN ARCHITECTURE (SERIES II.). XL.—CITY HALL, CLEVELAND, OHIO.

J. MILTON DYER, ARCHITECT.



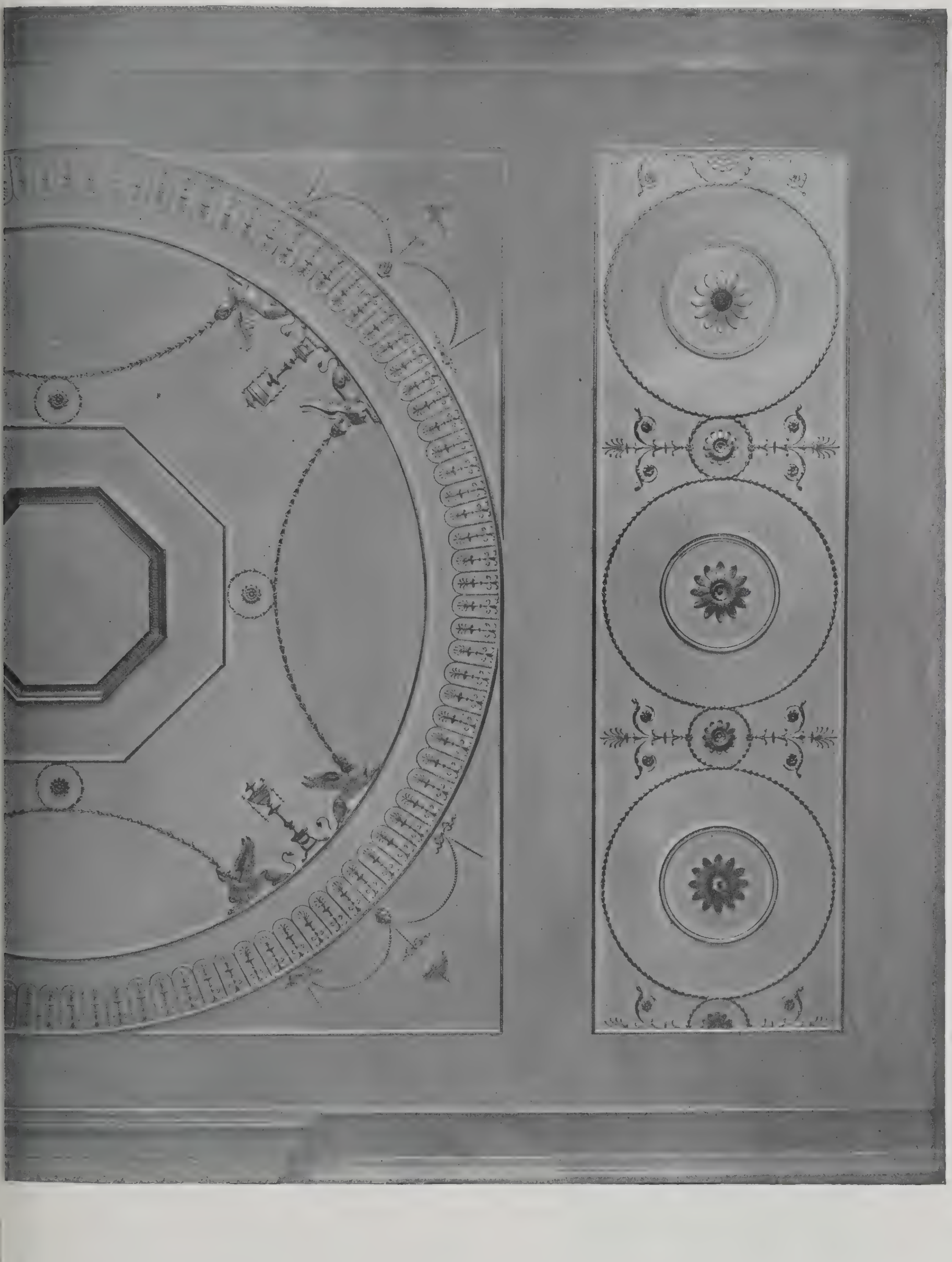
The Council Chamber.



The Grand Hall.

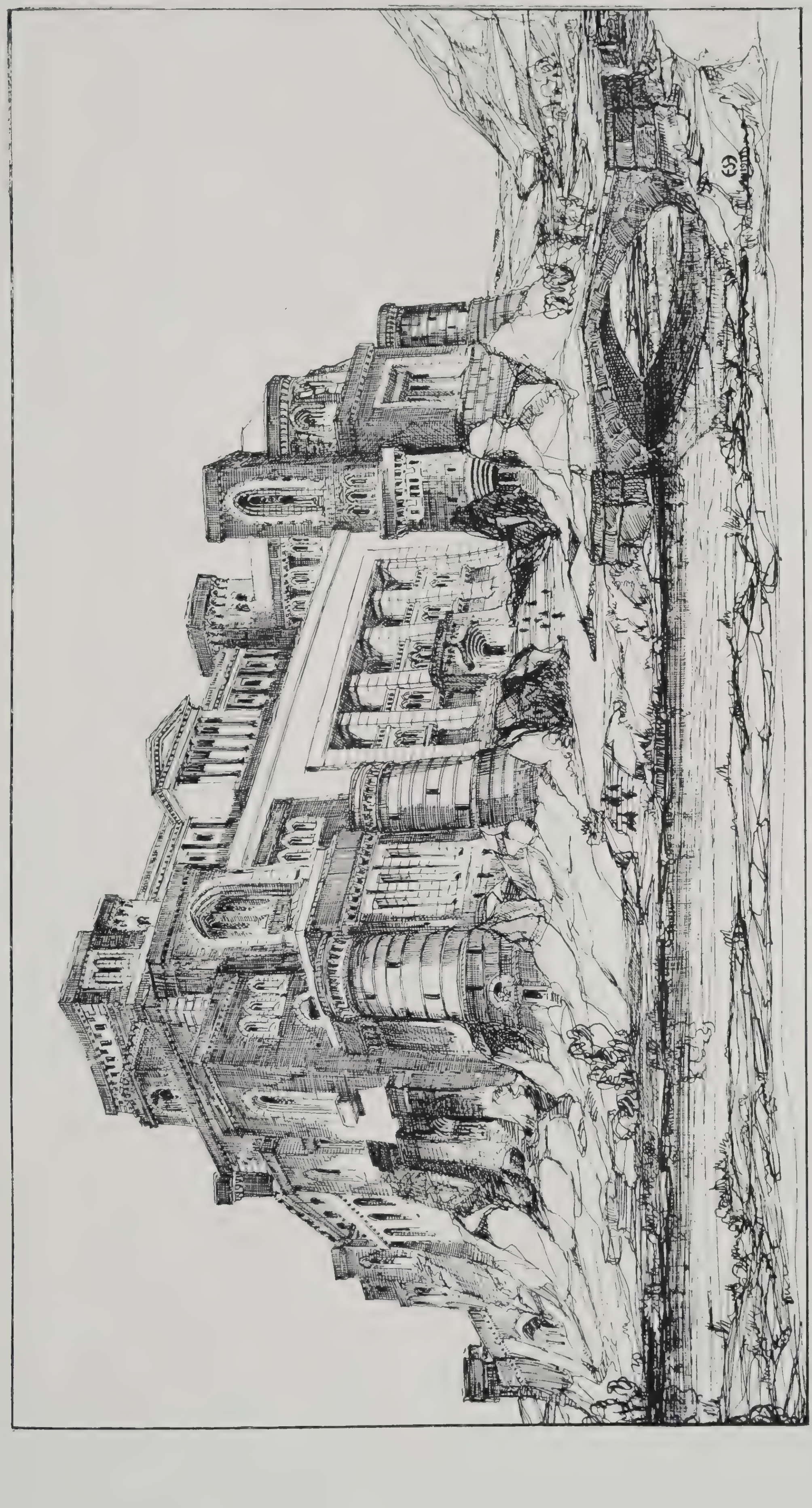
MODERN AMERICAN ARCHITECTURE (SERIES II.). XLI.—CITY HALL, CLEVELAND, OHIO.

J. MILTON DYER, ARCHITECT.



DETAILS OF CRAFTSMANSHIP (SERIES II.). XLIII.—CEILING OF GROUND-FLOOR DRESSING-ROOM FROM HAREWOOD HOUSE, HANOVER SQUARE, LONDON (NOW DEMOLISHED).

ROBERT ADAM. ARCHITECT.



ARCHITECTURAL IDEAS.—VII. BY AN ARCHITECT ON WAR SERVICE.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

OCTOBER 17, 1917. *TOTHILL STREET, WESTMINSTER.* VOLUME 46. No. 1189.

NATIONAL PAPER ECONOMY.

ing to the very necessary Government restric- on paper supplies, all elements of waste must orously excluded. Our readers, we are sure, ladly assist in promoting this object, which is m in national economy. They can co-operate us effectually in either of two ways—(1) By g a direct subscription for this Journal, or (2) cing with a newsagent an order for its regular ry. Casual purchases—now here, now tkere— a serious discrepancy between supply and nd, and cause a wastage of effort and materials ould obviously be reduced to a minimum but he casual and erratic purchasing which we stly ask our readers to avoid.

immediate benefit arising from the Local Government Board's circular requiring local authorities to ascertain and formulate their ng needs is the collection of a valuable of statistical evidence. On the whole, census has been taken with much thorough- and it is, in effect, a nearly complete survey using shortage throughout the kingdom. It hing more. It will give the Government very nformation beyond an approximate statement of tal number of houses that will be required to ke the lamentable arrears into which the y has fallen, from which the Treasury will be o infer how much money must necessarily be ed to this object. In what ways that money is distributed is still an open question, and upon the m with which it is answered the success of the e largely depends. It matters a great deal to the task of building is entrusted, and the task of ninating between the many rival claimants for les is one of which the difficulty can scarcely be erated. If the money is distributed among them unicipal authorities, private builders, public- societies—it will be frittered away, for there will many sources of leakage. That the Govern- shall itself form a Building Department to under- he work and afterwards to perform the functions Housing Ministry is a suggestion that has been sly put forward, but, in our opinion, this would out the worst possible solution of the problem. ly we have too many State Departments, and it nently desirable not to add to them one that almost certainly create more discontents than it allay. We should get confusion worse con- ed. A better expedient would be the creation dit banks, from which all possessing satisfactory tials and offering sufficient guarantees could v upon housing account. Some such system as ould cut the Gordian knot, would placate rival sts, and would relieve municipalities of a good f responsibility with which large sections of the unity would rather not saddle them.

* * * *

ould be strange indeed if the deluge of housing n did not occasionally carry on its rushing cur- me curious items of flotsam and jetsam. Raw- ll Corporation invited Buckfastleigh Urban il to pass a resolution "that in order to secure ate housing accommodation for the working , the Government should be prepared to lend money free of interest to local authorities prepared to proceed with housing schemes, and that the repayment of the money should be spread over a period of 200 years." The fate of this resolution is laconically reported: "No action was taken." Surely Buckfastleigh should have welcomed with enthusiasm so grandly simple a solution of the eternal money difficulty. So great an opportunity may never occur again; a joke like that cannot be repeated in the same borough. One would like to get at the genesis of it, and can imagine some mad wag, who had been reading Morris's "News from Nowhere," where money is unknown, elaborating the first draft, and the rest of the Council, labouring to improve the jest. "Two per cent.!" some councillor may have exclaimed—"preposterous! I move naught per cent." Carried. "Spread over ninety-nine years! Musty old formula! Make it a round hundred." "Oh, why not two hundred?" pipes a satirist. Amendment accepted to confusion of satirist. It would not be surprising to hear that further amendments, proposing that tenants should live rent-free and be provided with an income, were reluctantly rejected on the ground (the corporation rolling on the floor in convulsions of laughter) that Dora might intervene. Really it is impossible to treat this resolution otherwise than as a choice sample of Rawtenstall humour.

* * * *

It is almost equally hard to take seriously a letter which we have received from the Liberty and Property Defence League. This letter is headed "Organisation Against Social Revolution," and it begins: "Recent events point to the need for such an organised effort on the part of the property-owning and trading classes of the country as will ensure that the machinery of Parliament and local governing bodies is not captured by the rapidly growing revolutionary element and used for the purpose of securing the abolition of all private rights and the confiscation of all property and trade interests by a labour syndicate which will eventually repudiate the State itself. The ideals of the revolutionary theorists cannot be dismissed as mere Utopian dreams. Economically, these ideals are fundamentally fallacious; but the theories upon which they are based are being zealously and vigorously propagated among the wage-drawing classes of the community, who are being taught to regard the whole product of industry as their own, and capitalists and employers as exploiters and robbers." There is much more to similar effect, but we should not care to reproduce it, even if space were less precious; the fact being that we should greatly like to see a more conciliatory spirit on both sides of the argument, and in discussing such matters we have always endeavoured to preserve and to commend that spirit. We have sufficient faith in the sense of justice and the humane kindliness pervading all classes in this country to feel confident that, whatever changes may take place in Britain as the result of social and industrial reorganisation after the war, exploitation and robbery will not affect the issues. In so far as the Liberty and Property Defence League falls short of this robust faith in the general honesty of the people, it very obviously falls short of a true conception of the issues, and of the forces that control them. We believe, with Lord Leverhulme and other far-seeing publicists, that the industrial problem will be solved by a more enlightened use of the machinery of production. More systematic education, the enlargement of the workers' horizon, higher wages, better housing, a higher standard of health—these are among the conditions that will cure labour unrest without impoverishing the "property-owner," and these are the elements of a "social revolution" of a vastly different character from that which is contemplated by nervous and self-centred alarmists.

* * * *

Mr. Marion H. Spielmann has hit on a fascinating theme for a succession of articles in "The Times" Literary Supplement. He deals with booksellers' signs, confining himself, in his first article, to those used by early publishers of Shakespeare's plays. He states that in the sixteenth century there were twenty-eight such signs in St. Paul's Churchyard, and "about a score farther afield." Probably not one of the original signs is in existence, though a modern carving of the Bible and Sun at the north-west corner of the churchyard commemorates the sign that was on Newbery's shop when Goldsmith was writing children's books for him. Sentimentalists sometimes lament the wholesale disappearance of signs when the introduction of the penny post brought in the numbering of houses as a quicker and more certain means of identifying them; but, according to Mr. Spielmann, we ought rather to rejoice at the loss of "those panels which challenged public notice by their incongruity, by their wretched execution, their stupidity of conception, and coarseness of painting, vulgarly displayed in overwhelming numbers."

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Inns and public-houses, in preserving for us the old pictorial custom, have improved vastly on the daubs that Shakespeare scorned. In point of execution, most public-house signs are quite excellent pieces of brushwork; but the Anchors, White Horses, White Harts, Tigers, and so forth, bear so close a family likeness, Hart to Hart, as to suggest either that convention holds the sign-painter in thrall, or that the brewers hold him in fee. At any rate, he conscientiously makes each new horse an exact replica of all the others. Occasionally the sign is sculptured or modelled, often quite respectably, as in the case of the Lion Brewery on Bankside. This brewery, by the way, is surely distinguished from all others by its Classic design, which is rather falsified by the perpendicularity of the building. An objection that has been frequently urged against modelled quadrupeds as public-house signs is their disconcerting habit of occasionally wagging their tails—a phenomenon widely attested, but upon somewhat unstable evidence. Many of the older inn signs are framed in hammered ironwork of excellent design; while outside banks and insurance offices there are often to be seen most gratifying evidences that modern metal-workers are living up to the best traditions of their artistic craft. Those in authority over Council schools might do much to encourage the arts and crafts by hanging out their signs, but have not yet risen to a due sense of their obligations in this respect.

* * * *

"Two Architects," in association, have written to the "Saturday Review" accusing Dame Dora of being "a lady of fashion." They are scandalised by the following announcement: "Promenades des Toilettes and exhibition of Autumn Fashions by living models will be held"—on such and such days. "The Parade will take place from 3 to 4 and from 4.30 to 5.30 each afternoon, and no tickets of admission will be issued or required." These Two Architects have the audacity to suggest that Dora should intervene; for, say they, Dora and her amending Acts have been the cause of regulations and orders innumerable, made with the ultimate object that the full strength of the country shall be devoted to the prosecution of the war. "In the spheres of architecture and engineering we are restricted to a minir of expenditure on labour and materials in every of work, not only in the matter of new undertak but also in repairs and overhaulings." This is all well; but to expect Dora to act consistently is impli to deny her one of the most cherished privileges of sex. If, coming straight from insisting on pinc economy in the kitchen, she marches off, with mili stride, to indulge lavish extravagance at the dra why, that is only pretty Dora's way. It shows delicate susceptibility to the natural law of reboun revulsion. What though architects are restricted minimum of expenditure on works of utility? Is any reason why ladies should also be bound dow repairs and overhaulings? Dowdiness, having in with the war, has been necessarily long ou fashion: who ever heard of a feminine fashion las three years? Besides, this function to which the Architects object with such frivolous unreason is helping on the war. Is it not described as a Par And the ladies who attend it in their thousands a imbued with the strictly patriotic desire to assume Paint. When the weary warrior comes home few days' rest, he likes to see his womenfolk ext gantly drest; the ladies very frankly tell us so i cheap magazines. Then, again, there is a hi practical issue which it would be fatal to over There is a certain subtle connection between milli and munitions to take into account. Dora is wiser—knows much more of feminine psych than these Two Architects, who are presumabl mere men (though nowadays you never can tell) she is aware that a Promenade des Toilettes, or similar display, is a most potent recruiting agenc the munition factory, where the rewards of fe diligence are potential for gorgeous raiment.

* * * *

Professor W. J. Pope, F.C.S., of Cambridge Un sity, drew attention, in the course of a lecture deliv at the Regent's Street Polytechnic, to the long tinued gross neglect of science in this country, an consequent total loss of many industries and th but complete undoing of many others. Talent declares, we have in plenty, but very much of allowed to run to waste for want of adequate faci for its training and development. What the B can do under stress and stimulus is demonstrated i splendid achievements in munition-making, and i quick recovery of many lost chemical and indu processes. We have, as Mr. Pope said, done m three years than the Germans, with all their bo perfection of the machinery of scientific and tech education, have done in forty. In particular, we erected in all parts of the country machinery o highest efficiency, and, in an incredibly short have trained an enormous army of skilled wor To talk about the reorganisation of industry as were something to begin to think about when th is over is beside the mark: it is an accomplished Everywhere our factories and workshops are equi with the most approved agencies of swift produ and the ranks of skilled labour have been vastly plied. To turn these instruments to civil use w much easier than to beat swords into ploughsh but there arises here a point of the utmost import Peace may come suddenly and find us unprepar keep this machinery running upon civil work. U this employment is immediately forthcoming works may have to be dismantled and the worker persed. Obviously, therefore, it is of most u importance to provide against this contingency, o catastrophe, by preparing now, in all possible the work that, at the end of the war, must be hand at the earliest possible moment if due adva is to be taken of the machinery which will be where ready for its economical execution.

HERE AND THERE.

MES FERGUSSON was born at Ayr in 1808, and was therefore forty-seven years old when he published, through Murray, his "Handbook of itecture," and fifty-four years old when, in 1862, sued its sequel, which he called "History of the rn Styles of Architecture." To those who would ent that this was a rather late blossoming into rship may be opposed somebody's dictum that dy should write a novel until he is sixty. Possibly s William De Morgan who said this. If so, he well within his own rule when he commenced r at the age of sixty-seven, achieving in his ing years greater fame as a novelist than all the of his youth and vigorous manhood had brought s a potter. Not but what he was a better potter novelist; only the fickle public are not very disnating in their assessment of the values of fictile s. Hence a trashy novel may make a fortune for l, while a work combining utility with delight—history of architecture—may scarce pay for the ng. No doubt Fergusson's works were uncomy successful commercially, but in this respect were rather exceptional, and it is nevertheless doubtful whether they brought their author a etency—otherwise he would not have suffered ous engagements and occupations" to impose so an interval between the inception and the comn of his work. A book on architecture is almost iably a parergon, "written," like Helps's famous s, "in the intervals of business"—and written as a rule, when the author is past middle age, if well stricken in years." Mr. March Phillipps and eoffrey Scott are merely notable exceptions to ule; for it could be shown that—especially within t years—most of the more important books on tecture have been written by middle-aged men—few of them, indeed, by men more than seventy young, whose eyes are not dim, neither is their al force abated.

* * * *

the age of seventy-four, Fergusson contributed e "Nineteenth Century"—which was founded dited, as I recently found occasion to recall, by chitect, James Knowles, who was ever ready to d liberal hospitality to the Mistress Art—an e on "The Proposed New Cathedral for Liver-' It is the praise of the great reviews that they iate on their subject in the grand manner. usson, of course, had caught the trick of it. His e is a sketchy history of cathedral architecture, a running commentary that is perhaps less critical opinionative. He approves of the site that had tentatively chosen by the building committee. It in the very centre of the most important part of ty, and in the immediate proximity of some of the ornamental buildings." A saddening piece of terese; but Fergusson never was a stylist, and nore he wrote the more hackneyed was his ing. It is so much easier to write the degenerate sonese of the journalist than to toil after simy as Landor did. Nor would it be fair to demand the historian of architecture, who deals largely refractory facts, the refinements of purely creative g, in which the substance wrought upon is plastic writer's will. Nevertheless, between the Greek rity of Landor and the clumsy clichés of the paper hack there is a *via media* which Fergusson found, and his style is distinctly below the stanmaintained by the more recent writers on archire. March Phillipps at his best is on no lower than Ruskin—is in the best sense Corinthian; eginald Blomfield is a model of rugged strength oric in his directness and his scorn of ornament; Sir Thomas Jackson's style is Pointed of the best period, with occasional leanings towards Byzantine detail; Fergusson is vernacular of villadom.

* * * *

Fergusson's article was written about ten years before Liverpool Cathedral was begun, and it is not surprising that the scheme did not develop exactly as he thought it would. He favoured the St. John's Churchyard site, and declared that "not even the most bigoted stickler for the preservation of ancient monuments could object to the church itself being abolished. It is one of the very worst examples of churches built in the 'Strawberry Hill' style of Gothic architecture, and is an eyesore and a disgrace to the very prominent position it occupies." But the site chosen, after much controversy, was St. James's Mount. He then mentions what he calls the "rather novel expedient" adopted by the committee in their quest for a design. "They issued a circular inviting any architects that were inclined to compete to send to them their sketchbooks, or any drawings they might have by them, which would be likely to assist the committee in forming an opinion of their ability or fitness for the task. . . . Some eighty architects answered the invitation, and out of these four were selected to prepare designs out of which the committee might select one for execution. From the professional eminence already attained by Messrs. Bodley, Brooks, Emerson, and Pearson, there can be no question as to the fairness of the selection, and little doubt that among them they will submit a design as good as can be produced under the circumstances." I have always thought this method of selection, which is not so novel as Mr. Fergusson assumed, to be about the most fatuous conceivable. How is it possible to divine, by inspection of an architect's "sketch-books," whether he is likely to produce a good design for a cathedral or whether, indeed, if "sketch-books" is really the right term, he could design anything at all? But "sketch-book" is an elastic word that may be stretched to cover a multitude of sins. That, after all, the chosen design came from the very capable hands of Mr. Giles Gilbert Scott is now a matter of history that is already growing ancient. At the outset it was thought that Mr. Scott was too young to undertake so vast a work. Whether ultimately he will be considered too old to finish it depends a good deal on the duration of the war.

* * * *

Fergusson, commenting upon the choice of four architects who were "in common parlance entitled Goths," thought that the adoption of Gothic for the cathedral was inevitable; but goodness knows how we shall ultimately describe the noble building which, so far, has been endowed with a vitality that mock-Gothic never knew. Fergusson scouts the suggestion made by some daring spirit that Wren's first design for St. Paul's should be adopted; for "the building is, externally, a very ugly one, infinitely inferior, in almost every particular, to the one actually executed, and the interior is marred by Wren's curious mania for replacing his great dome on an octagonal base; . . the introduction of the octagonal arrangement has given rise to as clumsy and awkward a piece of architecture as exists in the interior of any church in Christendom." Moreover, Wren certainly would not have slavishly followed his model, whereas if it had been adopted for Liverpool nobody would have had the courage to commit the sacrilege of departing from it. Wren, it is notorious, modified very extensively as his building grew. All architects must do that, often to the great scandalisation of the client, who thinks he is not getting what he was promised—a stodgy view that has too often prevailed in courts of law, wherein the architect is sometimes amerced in damages for doing that for which he should have been applauded. Mr. Scott, whose devices "grow with his growth and strengthen with his strength," is fortunate in working for an enlightened committee. His sternest critic, his most exacting master, is himself.

* * * *

Fergusson died in 1886. It is said that he was the originator of the Palestine Exploration Fund. One trusts that he was well out of the indigo plantation business before the Germans ruined the industry by producing indigo from coal-tar products. With this German indigo the uniforms of our own naval officers were dyed; and the use of chlorine in making the dye suggested to the Boche the employment of asphyxiating gas in warfare, and it will be remembered that the initial success of this dastardly expedient led him to vainglorious boasting about his "superior scientific attainments." His trouble is that the world no longer accepts him at his own preposterous valuation—will not, in fact, accept him at any price.

DIOGENES.

A MOUNTAIN VILLAGE IN MACEDONIA.

BY OSCAR F. TURVILL.

THE mountain villages of Macedonia differ in every respect from those situated in the valleys. With regard to their situation, there are several points to consider, the chief of which is water supply.

Most of the ravines contain water during the winter months, but only a few in the summer, so it is necessary, where possible, to choose a site near a ravine which has a spring or two. A spur on the mountain side is a most suitable position for a village.

In the majority of cases the southern side of the spur is chosen because it affords the necessary shelter from the north winds and the driving snow.

As the mountains consist largely of rock, it is natural to find that a good many of the houses are built upon it instead of on ordinary foundations, a ledge being merely cut in the rock as a base to the walls. The houses, in nearly all cases, face south. The weather is a serious problem, as allowances have to be made for extreme heat and also for extreme cold; and linl with the latter is the knowledge that heavy snow to be borne by the roof, and because of the slope of ground drifts are also likely to occur. In consequen the back, or north, wall must be thick, and bare of aperture. The sides of the house are also bare. Th sides of the house being accounted for, it remains the southern side to be designed for both summer winter; hence, the deep verandah, which is a featur all the houses.

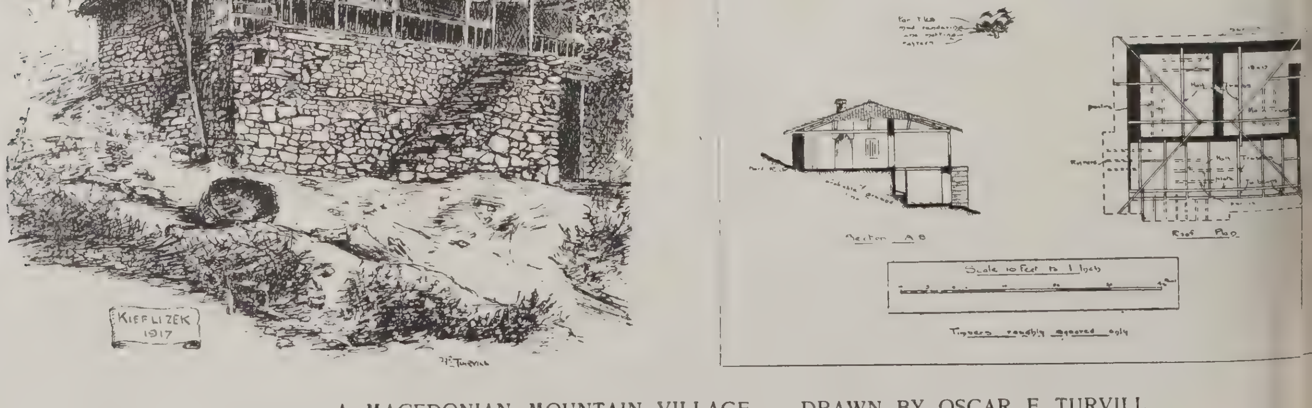
This verandah, in most cases, runs the whole len of the side. The slope of the hill makes the floor the verandah some 6 ft. or 7 ft. above the ground, t giving a space under, which is utilised as a stable oxen and donkeys. The party wall dividing verandah from the winter quarters is thick, and only two openings—one to each room. The firepla are merely niches in the wall, with a canopy about off the ground. Cupboards are also formed by leav niches in the wall.

In building the roof the probable weight of s has to be considered as well as the intense heat of summer. The former is apparently allowed for by enormous amount of timber usually found in the ro The latter is dealt with as follows: Cane mattin fixed to the rafters, and then rendered with mud ab 3 in. thick, the pantiles being laid on this, the forming a bed. This keeps the houses delightf cool. The underside of the roof forms the ceiling the timbers being tarred. The party walls are car up to the roof. The eaves overhang 1 ft. 6 in. at back (north) and 2 ft. 6 in. on the south front. As height from the underside of the eaves to the veran floor is only about 6 ft., the sun is excluded, and the whole house is kept comparatively cool.

The springs are utilised for water supply as follo A basin is cut in the rock about the spring, and a st wall is built up round it. This wall is a semi-circl plan, and is carried up about 3 ft., then ei domed over or covered with thick slabs of stone over the top. A small niche is left in the wall to f a receptacle for a mug.

In some cases where several small springs are each other, giving a fairly strong supply of wat fountain is constructed thus:—

A wall is built in a suitable place about 8 ft. by by 2 ft. thick. Two niches are formed in the face cups, and one niche on the centre line about 3 ft. of



A MACEDONIAN MOUNTAIN VILLAGE. DRAWN BY OSCAR F. TURVILL.

und.' Running through this niche is an iron pipe jecting about 6 in. from the face. At the back of wall a channel is formed from the pipe, to which all se springs are guided, thus making a fountain with rong supply of water.

one village the inhabitants were dependent on fountain for water supply. The water was guided his fountain for several kilometres by means of . pipes, cemented. These pipes were about 2 ft. g, tapered at one end, with a slight shoulder for ng in and butting on to the next pipe.

THE PLATES.

Architectural Ideas in War Time.

this drawing our contributor has produced a striking composition by the piling up of formal masses tier upon tier. The entrance, with its ad flight of steps framed in by curved wings and hasised by heavy pylon-like abutments, stands out in contrast with the elevational treatment on ter side, which is remarkable for its novel combina- of pilasters and caryatides.

Study for an Exposition Façade.

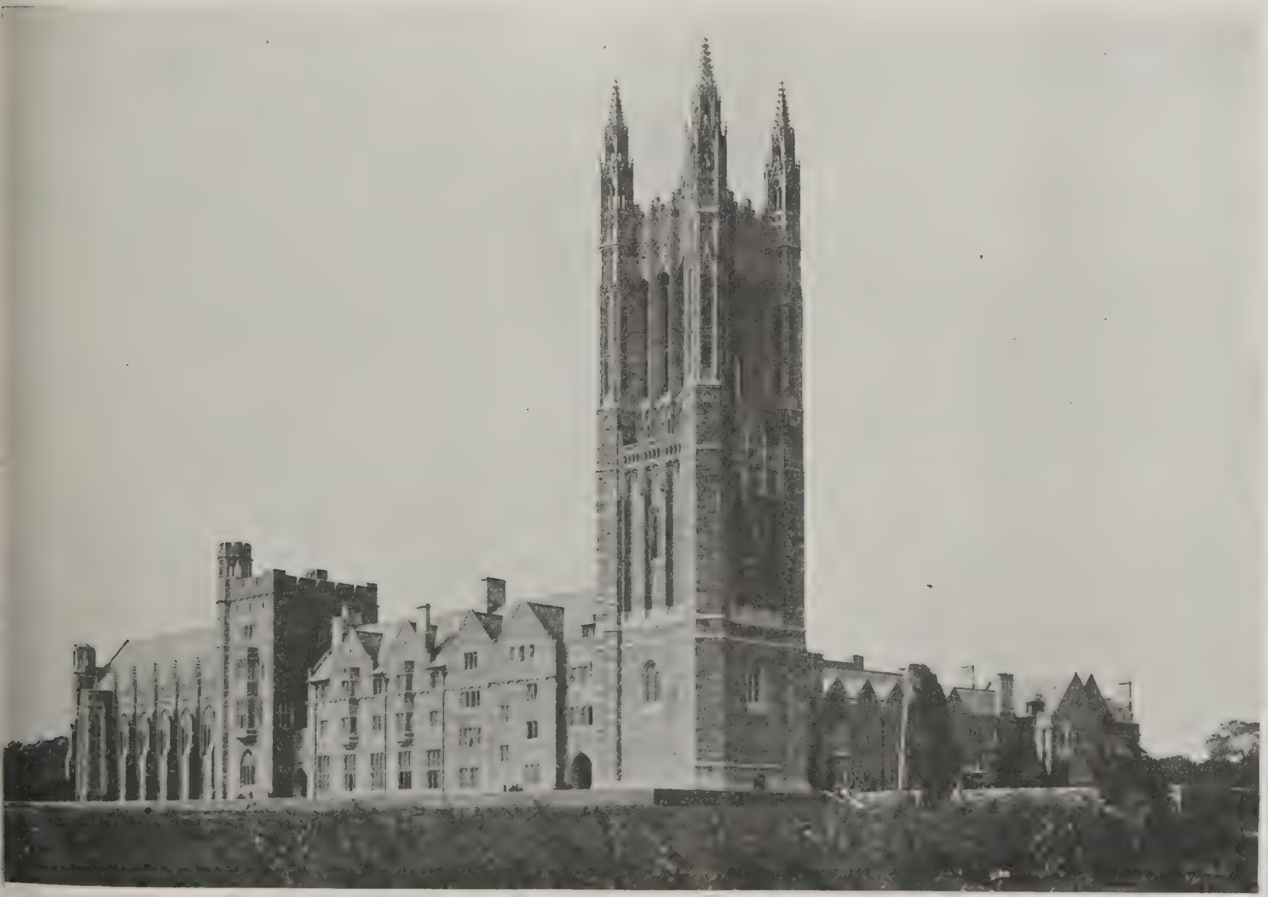
xhibition buildings in this country have seldom or er achieved a very high level of architectural merit. ause of their temporary character, and the flimsi- s of the materials employed in their construction, ems to have been assumed that there is no need to ble about making them architecturally attractive. t this idea is altogether wrong-headed our erican Allies have proved to us time and time again hin recent years: the exhibitions at Seattle, San ncisco, and Chicago, are memorable instances. It ery encouraging to note, therefore, that this class uilding is receiving some attention from our schools of architecture. Mr. T. Medina's Study for an Exposition Façade was on view at the recent annual exhibition of the Liverpool School, and it was referred to in the article which appeared in our issue for September 26.

The Great Hall, Blenheim Palace.

Having completed our representation of the exterior of Blenheim Palace, we begin in this issue a series of views of the interior, the Great Hall being the first example. Further subjects will appear in due course.

The Graduate College of Princeton University.

The Proctor Hall of Princeton University, illustrated on the double-page plate in this issue, was built by Mr. W. C. Proctor, of Cincinnati. It compares in beauty and in size with the finest college-halls of Great Britain, upon which, no doubt, it is largely based, though without being a copy of an existing example. The roof is an admirable piece of construction, the trusses being wrought from huge oak timbers and embellished with carving. The walls are wainscoted in oak to the splayed sills of the windows, and at one end is a fine screen, richly carved. (See single-page plate in this issue.) The hall is capable of seating more than 400 guests. The most conspicuous feature of the whole building is the Cleveland Memorial Tower (see illustration below), erected in memory of the late President Cleveland, who spent the last years of his life in Princeton. The tower somewhat resembles that of Magdalen College, Oxford, but it is on a larger scale and has greater height. Mr. Cram, the leading partner in the firm of Cram, Goodhue, and Ferguson, is a great Gothic enthusiast, who has made a close personal study of the style which he has so ably interpreted in his Princeton buildings. A plan and some other illustrations appeared in our issue for September 9, 1914.



THE GRADUATE COLLEGE OF PRINCETON UNIVERSITY, PRINCETON, N.J.: VIEW FROM SOUTH-EAST.

CRAM, GOODHUE, AND FERGUSON, ARCHITECTS.

PROGRESS OF THE NATIONAL HOUSING MOVEMENT.

South Wales.

Arrangements are being made to build 12,000 additional houses in South Wales.

Birkenhead.

A scheme for building 1,500 houses has been adopted by Birkenhead Town Council.

Gillingham.

The Town Council have resolved to inform the Local Government Board that, to meet present requirements, 500 new houses are wanted.

Keighley.

Keighley Health Committee have expressed the opinion that 150 new houses are required at the present time, and that a further 150 should be built at the end of the war.

Consett.

At the meeting of the Consett Urban District Council the Clerk submitted a report showing that 320 workmen's houses were required immediately, and 500 more at the close of the war, while, if the eight-hours day was introduced into the iron and steel trades, an additional 500 dwellings would be needed.

Burnley.

At the Burnley Town Council Alderman Keighley said that the Corporation were prepared to submit a scheme to the Local Government Board for the provision of 500 new houses, in response to the Government scheme for providing for the working classes after the termination of the war.

Dundee.

Dundee Housing and Town Planning Committee desire a grant-in-aid of £287,550 for their three housing schemes. Mr. James Thomson, the city engineer, said the number of new houses estimated as being required to provide accommodation for persons of the working classes in the city was 6,000, adding that there had been 2,000 war marriages.

Barrow.

Schemes are in hand for the provision of 500 semi-permanent and 500 permanent houses. The two schemes are to be started simultaneously, and it is anticipated that the semi-permanent houses will begin to be ready by Christmas and will probably be finished by the end of March next, and the permanent houses will begin to be available by the latter date. Once these houses have been erected the housing question at Barrow will not be completely solved, but its immediate urgency will be relieved. The semi-permanent houses are to be built of concrete, and consist of four and five rooms. The permanent houses will be of the same size, and will be planned and laid out with a view to æsthetic as well as sanitary considerations. The Ministry of Munitions have arranged with the Corporation that 250 of the 500 permanent houses should be taken over by them five years after the war, and it is hoped that the second 250 will also be taken over by the Corporation.

Nottingham.

In submitting the report of the Housing Committee at a recent meeting of the Nottingham City Council, Mr. A. B. Gibson said that it was estimated that after the war 4,000 more houses would be required, as against 1,500 empties at the present time. At a later date the committee would ask for authority to make application for some of the subsidy which was being furnished by the Government for use either by the municipality or by private enterprise for the erection of cottage dwellings. By the vigorous action of the medical officer of health overcrowding in dwellings had been reduced to a minimum, but the overcrowding in space was not quite so satisfactory, there being 124 houses per acre in some areas.

Dewsbury.

At a meeting of the Dewsbury Town Council, the Health Committee reported that they had decided to inform the Local Government Board that the Council was prepared to erect 400 houses in addition to the eighty-four provided by the former scheme, and at the end of the war 300 houses, subject to adequate financial assistance being given by the Local Government Board. Mr. F. Dwyer stated that only 294 new houses were erected in Dewsbury from 1911 to 1916, but 111 other houses were closed or demolished. There was at present considerable overcrowding, and landlords were prejudiced against letting houses to families which contained a number of children. There were in the borough 5,177 back-to-back houses. Mr. T. Myers said that 2,388 people were living in Dewsbury in an overcrowded condition, and 23,403 in houses of three rooms and less. At four persons per house over 1,000 houses were necessary to meet the growth of the population and to remedy the overcrowding.

Carlisle.

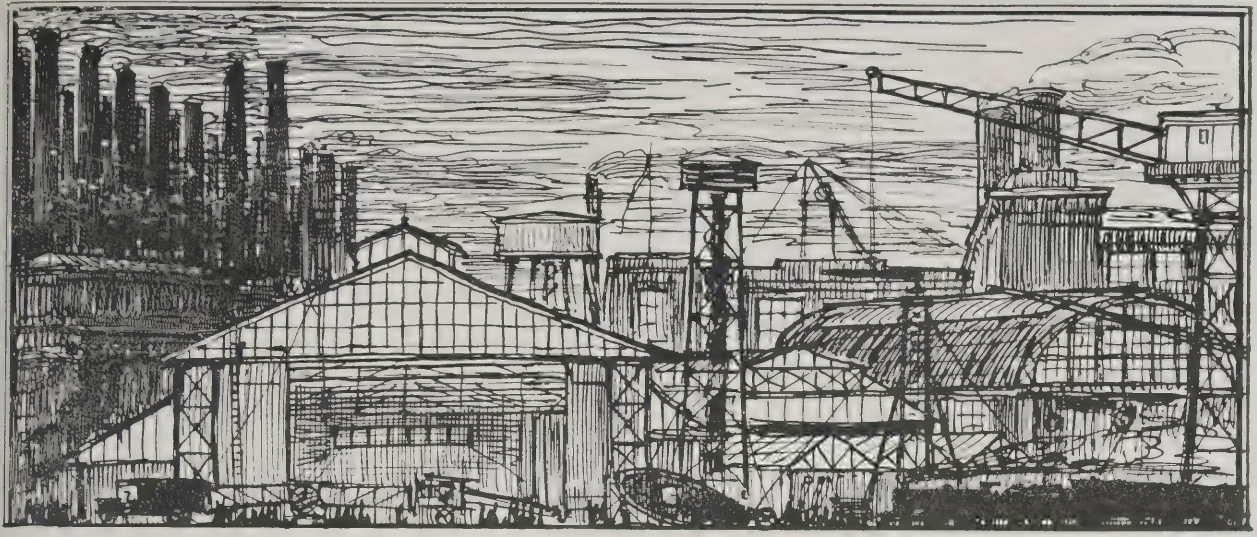
The Health Committee of the Carlisle Corporation have passed a resolution declaring that there was an immediate need for 600 new houses for those in the city now requiring houses, and for a further 1,500 to accommodate the families that will be displaced by the proposed demolition of a number of insanitary and congested areas. The Committee also recommended the City Council to submit their proposals to the Local Government Board for their observations and approval, and with a view to the work being commenced at the earliest possible date, the building of the houses to be spread over a period of years. The Surveyor submitted a scheme for dealing with one overcrowded and insanitary area on which there are at present 137 dwellings inhabited by 570 persons, and on which he proposes the provision of fifty houses to accommodate 208 persons. In the course of the discussion, it was stated that it is proposed to take other areas and deal with them in the some way. To guide them in their consideration of the question, the committee have caused a census of the city to be taken. It shows that the population at the present time is 56,437.

Walsall.

A report has been issued by the Town Clerk of Walsall dealing with the answers sent to the Local Government Board to questions asked concerning housing in Walsall. The circular gives the population of Walsall (census, 1911) as 92,115 persons, and the number of dwelling-houses over £12 ratable value as 1,900, and up to £12 as 16,652, a total of 18,552. There are practically no vacant houses suitable for the working classes, and in all respects reasonably fit for human habitation. Two hundred and fifty new h are required, and 750 should be bu the close of the war for the wo classes. A new scheme has been consideration since September, 1916 the erection of 250 houses on garde lines, and the carrying out of this sc will depend on the amount of assis coming from the National Exchequer Town Council being of opinion tha assistance should be sufficient to pr the housing scheme involving any bu on the rates. It is expected there w no difficulty in getting a suitable sit the garden city, and it is proposed t quire a site of about twenty-five acre

Northallerton.

At a meeting of Northallerton U. Mr. Jameson referred to the finding Sub-Committee on an inquiry into ho accommodation, following the receip circular from the Local Governe Board. About 100 houses were requ for the accommodation of workpeop connection with the new factory whic being erected at Romanby. The h would be required in Romanby and the Northallerton urban area. Some ago the Council petitioned the C Council and the Local Government for the purpose of getting Romanby i porated into Northallerton, but the cation was refused. The accommod was required in the northern part o town, and in that direction the C could not get land in its own area. question of building would have t taken up by the Council, because i impossible for builders to obtain lan at the present price of materials labour erect suitable houses to let small rent. The Ministry of H would insist on a better standard of ing for the working classes in the fu and he hoped the Council would st town planning scheme. He moved the Local Government Board should formed that 100 houses were requir the town, and that the present boun prevented the Council building with area the houses required, and tha present boundaries prevented the C building within its area the house quired, and that the North Riding C Council and the Local Government should be approached with a vie Romany, or the upper part of it, bein cluded in the Northallerton urban Mr. George Colton seconded, and that most of the land on offer for bui situated in Northallerton was subje conveyance on such conditions th build houses to let at a small rent wa possible. The Chairman said he th the Council had been quiet too lon this question. Northallerton wa urgent need of houses for the wo The extensions in the district were on in the neighbouring townshi Romanby, which had no lighting sc no sewerage system, and no water sc He thought it worth while to ask the Riding County Council to reconside decision against the incorporatio Romanby. Wages in Northallerton not on a high basis, and it was ther necessary that builders should be a get land on easy terms in order to houses to let at a rental of £10 to per year, which was as much as the age workers could afford to pay. motion was carried.



WAR·BVILDINGS·SECTION

ARCHITECTS AND NATIONAL SERVICE.*

A CHITECTS can render valuable service to the community in the nal reorganisation, and every effort be made by our profession to place the best position to render such ser- How far there is an awakening to ue condition of things time only will

ere has certainly been an awakening life of the Institute from its period ose which gives promise of much The three resolutions submitted to ouncil of the R.I.B.A. by the recent nal conferences in London and ; a policy of public usefulness are btedly stimulating.

se resolutions and the whole tone of nferences indicate a strong desire e policy of the Institute shall more y lead to its own proper development e improvement of the status of the sion. Notwithstanding the good chieved by the Institute and the self- g labours of those who for many have controlled it, there is the un- d fact that architecture and archi- ave not occupied their proper place world of affairs in our national up- . In the national interests of our sion, every effort should now be to prevent a recurrence of this un- ctory position. Some steps have aken to deal with it, and there is re- vidence of the desire of at least one Government Departments to utilise effectively architects' services h the Institute, and it is confidently that successful results will accrue may have far-reaching effects.

a strong and thoroughly repre- ve Institute, properly supported aintaining the present high ideals, th a more comprehensive outlook eater practical activities, much can ll be accomplished. No opportunity should be missed of obtaining proper professional recognition by all authorities, not only in London, but through and by the allied societies over the whole of the country. In the military mind there are engineers and surveyors, but not architects. When it was found necessary to lay out munitions and other works for military service the Government engaged an American engineer. The services of works architects in England do not appear to have been considered, though there are specialists fully qualified to arrange and carry out such buildings; and they would certainly have made more businesslike arrangements for dealing with their erection.

We all constantly regret the number of our highly trained young men who were relegated to positions in the army altogether outside their line of training, although their specialised services were, and are still, badly required in all directions and in all branches of the service. Some of our seniors anxious to take on work are helping in all sorts and conditions of things, dilution offices, substitution offices, clerks, and the like, positions in which they are doing useful work, but not specialised work, for which they are so well fitted, and in which they were so anxious to place their services at the disposal of the State. During the last year there has perhaps been a little more consideration given to architects, but only a little. Undoubtedly in much of the building work undertaken by the State, and particularly that directly arranged by the War Office, there has been throughout, and is still, the want of that proper direction and control which only a trained architect can supply. In these later years of the war valuable personal work has been given to the State by many architects. Mr. Ernest Newton, the ex-president of the Institute, and some others associated with him, have specially rendered important professional and semi-professional services gratuitously to the Ministry of Munitions and have done excellent work and not spared themselves in promoting the national interest.

The present organisations of the architectural profession and the specialised training, making for the directing forces of the country, have never been properly utilised by the State, so as to make them of the greatest value in the present crises in our history. Many square pegs have been put into round holes; the good intentions with which some of the appointments have probably been made, especially in the earlier days of the war, in connection with army building work have done a considerable amount of the paving of the hell of inefficiency.

The War Committee of the Institute, although it was at the eleventh hour desirous of seeing that in some manner square pegs should be fitted to square holes, endeavoured to help towards that end, in the early stages of the ill-fated National Service Scheme. Mr. Neville Chamberlain, the first director, received a very important deputation; all the speakers emphasised the advantage to the nation of the special training of architects being utilised in the National Service. He gave a most considerate hearing, and seemed to recognise our position. In the carrying out of the National Service Scheme, however, the character of the service to be rendered was not specified before enrolment was asked for, and this, with the petty jealousies between Departments (which are ever the bane of our English public service) foredoomed the scheme to failure. The revival will be followed with interest; the practical value of some of the stated objects of the new scheme except in the dealing with aliens is, however, doubtful. These national service schemes, though good in intention, have not so far got to the heart of things, and certainly do not appear likely to help materially our professional position.

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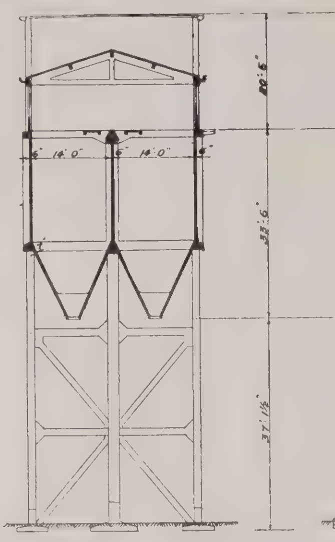
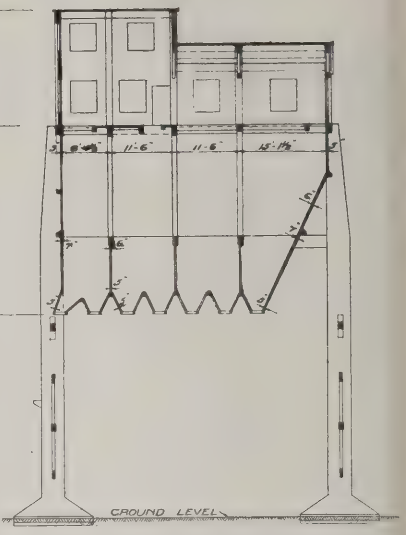
acted from the presidential address by Mr. Gass, J.P., F.R.I.B.A,, to the Manchester of Architects.

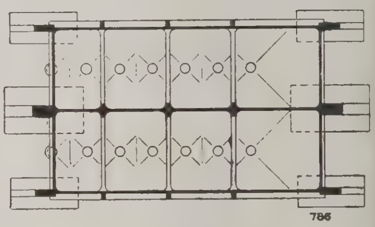
THE DESIGN AND CONSTRUCTION OF COAL HOPPERS.



CROSS SECTION



LONGITUDINAL SECTION



PLAN

THE coal hopper is a type of structure that possesses a special interest in these critical days, when the conservation of the country's coal supply has become a matter of high national importance. Large numbers of these hoppers, constructed wholly of reinforced concrete, have been erected throughout the coalfield districts within recent times, some typical examples being shown in the accompanying illustrations. Reinforced concrete, with that ready adaptability which is its most remarkable characteristic, has been found to fulfil all the requirements involved.

The hopper at Tinsley Park (Fig. 1) is carried at about 50 ft. from ground level on six columns, and as no bracing was permitted in one direction these columns had to be made enormously strong to withstand wind pressure. The clear span between each pair is 46 ft. 6 in.; the two outer pairs measure 45 in. by 14 in. in section, on a footing 12 ft. by 5 ft. 6 in., and the two centre columns are 50 in. by 24 in. in section on a footing 14 ft. by 8 ft. 4 in. Each three columns are braced diagonally with 12-in. by 6-in. ties, and horizontally with 16-in. by 10-in. ties.

There are eight compartments in the hopper, but the cross divisions do reach to the top; vertical beams tie the top and bottom are inserted in three longitudinal walls to give them required strength. The walls are 5 in. to 7 in. in thickness.

The total height of the structure is 9 the capacity 600 tons, and the maxi depth of coal 33 ft. There are four circular outlets, each 20 in. in diam Messrs. T. Wilkinson and Son, of field, were the contractors.

The coal and coke hoppers at Vale, Mon., were erected for the Vale Iron, Steel, and Coal Co., Ltd. capacity of the hopper shown in Fig. 1,500 tons. The structure itself mea 53 ft. by 34 ft. on plan and is 93 ft. from the footings to the top of the s structure. It is carried on ten colu those at either end are 30 in. by 12 i section, and the intermediate column 30 in. by 24 in., all braced with 8-i 6-in. diagonal ties.

The hopper is 40 ft. deep from underside of the superstructure to the lets, and is divided into eight com ments, each of which has a twin co mouth, with 3 ft. 6 in. diameter open The thickness of the exterior walls is at the base, tapering to 4 in. at the that of the division walls being 6 i 4 in., and that of the mouths 6 in.

As will be seen from the illustration superstructure is cantilevered at ends, the nearer overhanging 10 ft. and the farther 18 ft. 6 in. An ope 11 ft. by 7 ft. 6 in. is formed in the e the superstructure to accommodate a way, by which the hopper will be cha

The walls of the superstructure are thick, and the roof slab 3 in.; reinf concrete gutters have been provide carry off rain water.

Eleven feet beneath the hopper mo

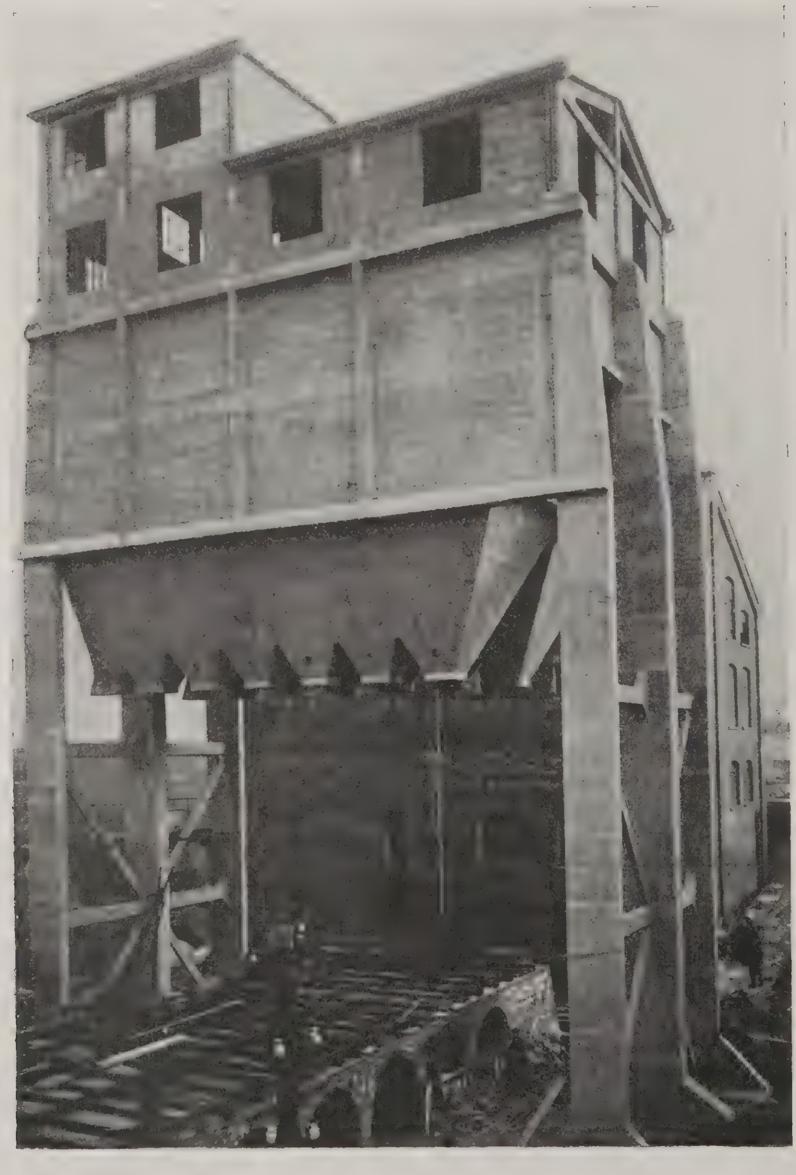
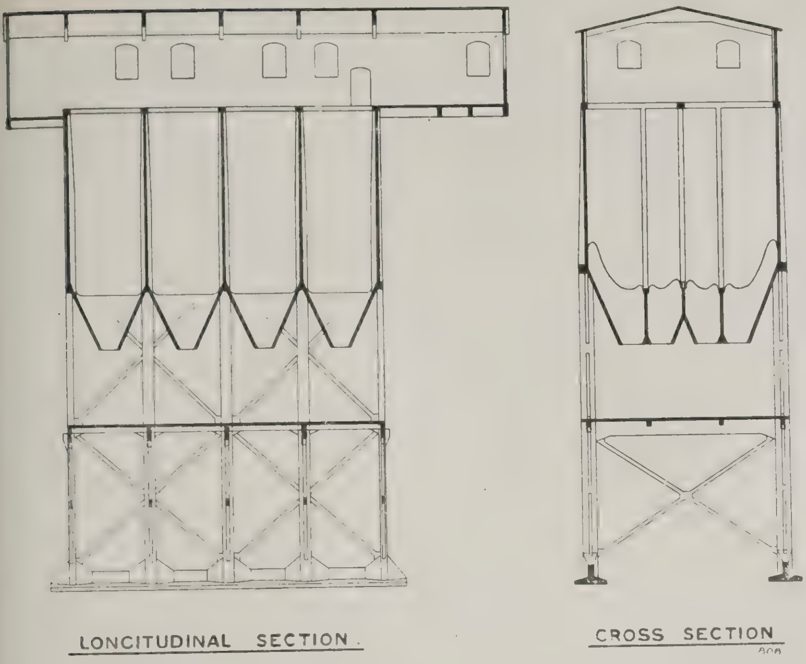


FIG. 1.—COAL HOPPER AT TINSLEY PARK.



SECTIONS OF COAL HOPPER AT EBBW VALE, MON.

ar 21 ft. 6 in. from the ground level, a pl form has been constructed, 4 in. in th kness, which carries the trucks into wh h the coal is discharged. This platfo n is placed on a level with the top of th ovens, so that the lorry travels over th n and thus charges them.

he footings are of the beam type, 39 in. de by 12 in. wide, with a tee beam 8 in. wide, varying from 9 in. to 15 in. de . The whole of the work is of reinfo ed concrete and monolithic.

he hopper shown in Fig. 3 is rather sn ller than the preceding example, hav- n a capacity of 1,000 tons. It measures 32 t. by 29 ft. 6 in. on plan, and is 73 ft. hi from the footings to the top of the su erstructure. It is divided by means of fiv division walls into six compartments, ea of which extends the whole width of th hopper and each compartment has two co cal outlets.

he depth of the hopper from the top of th coal to the outlet is 36 ft. It is carried on ourteen columns; the four corner ones ar 34 by 12 in section, supported by foot- n 10 ft. by 4 ft. 6 in.. and the light inter- m iate columns are 44 by 16 in section, ca ied on footings 14 ft. by 5 ft. 6 in., all or ed by horizontal ties 12, in. square. T walls of the hopper are 7 in. thick at th base, tapering to 4 in. at the top and th mouths are formed 6 in. in thickness, th opening being a circle of 2 ft. di ieter.

ie hopper will be charged by means of an levator, and the opening in the side of th hopper to accommodate this is clearly sh vn. Some delay occurred in the m ufacture, however, and a temporary el ator was erected, as shown in the ph ograph, which will, of course, be re- pl ed later on by one put in the correct po ion.

ie engineers in charge of all the hoppe illustrated were Messrs. Koppers C e Oven and Bye-Products, Ltd., who, in he case of the Ebbw Vale examples, al carried out the work.

l the reinforced concrete work was re- in ced with indented steel bars, supplied by Messrs. The Indented Bar and Concrete E ineering Co., Ltd., of Westminster, to wh n we are indebted for the accompanying illustrations, which afford yet another proof of the supremacy of reinforced concrete over the old-fashioned materials of construction for the works of utility that are now the order of the day.

NEWS ITEMS.

Concrete Boat Launched.

A concrete boat, believed to be the first in Scotland, has been designed and built by Mr. James Bowman, plasterer, North Street, Montrose. It is 12 ft. long, 4 ft. 3 in. wide, and 2 ft. 8 in. deep. After the launch, the boat, named Excelsior, was put on trial in the dock at Montrose.

Church Dug-Outs in Air Raids: Military Appeal to the Bishop of London.

General Sir Francis Lloyd, Military Commandant of the London area, is anxious to see all churches kept open as air-raid shelters. He has formally requested the Bishop of London to "give an order" to this effect, and his letter proceeds: "I am sure it will be a boon, especially in the East End of London. Many of the churches have excellent crypts, and being ancient, especially in the City, are strongly built and will afford excellent shelter—at any rate from bursting bombs or flying pieces of shell. I am afraid there are few buildings in existence that will stand a direct hit from a bomb; but evidence goes to show that most of the deaths and wounds occur from bursting bombs or flying pieces of shell." Dr. Ingram points out that Sir Francis Lloyd's suggestion has already been adopted in many parishes, and he knows that all the clergy of the diocese will readily welcome such an opportunity of doing all in their power to help their people in such a man-

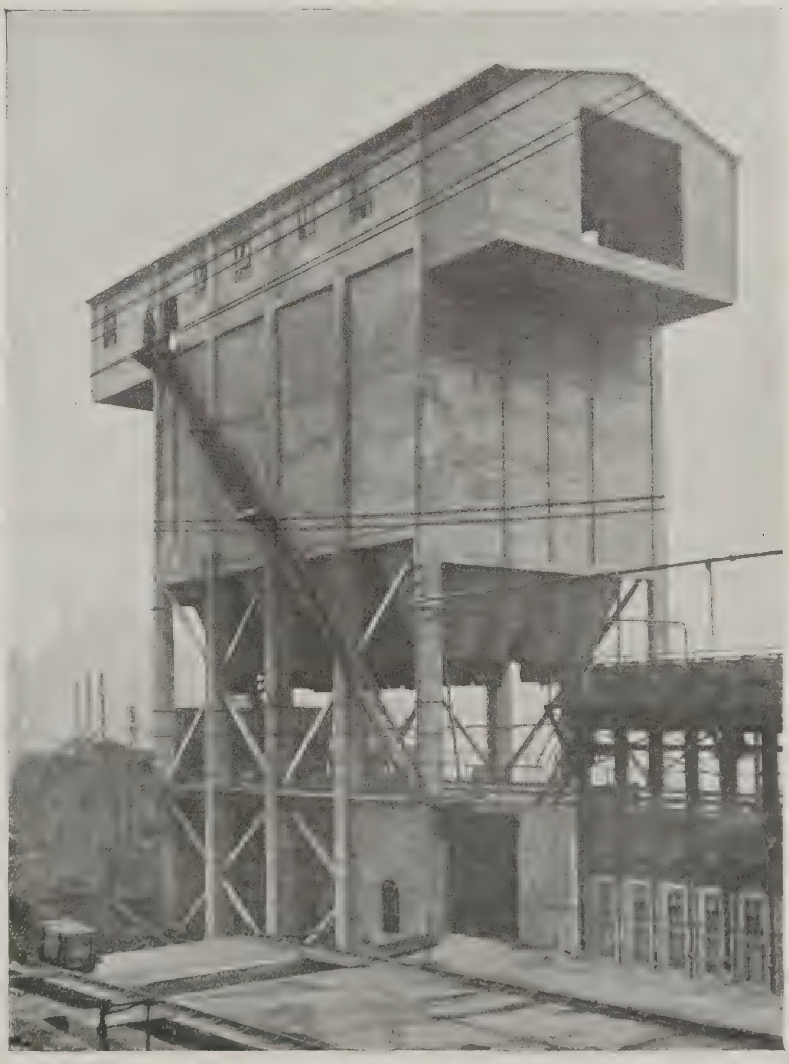


FIG. 2.—COAL HOPPER AT EBBW VALE, MON.

ner in the event of an air raid. The proposal meets with only the qualified approval of those Scotland Yard officials who have made a special study of the problems relating to cover during air raids. Where crypts exist the plan, they consider, is excellent; on the other hand, it would not be wise to encourage the public to leave their homes and congregate in large numbers in above-ground church buildings, which can only afford shelter from shrapnel or flying fragments. Much better shelter of this kind can be found in an ordinary house if a little common-sense is used. A direct hit on a crowded church would have terrible consequences. On the other hand, what is practically bomb-proof accommodation, in tubes, tunnels, crypts, and buildings of specially solid construction—is now available for 500,000 people at a time. This accommodation has been inspected and approved by the police, and is regarded as adequate.

Irish Granite Supplies.

The Lord Mayor of Dublin presided at a meeting at Sandyford, at which steps were taken to federate the interests of those engaged in the granite industry in Sandyford and Glencullen districts with a view to its further development. The Rev. J. Kelly, P.P., Sandyford, after extolling the quality of the stone, said great opportunities now loomed up in the rebuilding of Dublin and in the artisans' dwellings schemes. The Quarry Owners' Federation would work on business lines, be guided by modern methods, ruled by modern prices, and have punctuality and permanency as distinguishing characteristics. Central depôts would be set up to which the various quarry owners would be able to send the finished stone, and from which, by the adoption of improved transit, supplies could be more expeditiously and satisfactorily delivered. A resolution establishing the Federation was carried.

Historical Bedstead at Victoria and Albert Museum.

A famous State bedstead from Boughton House, Northamptonshire, recently presented to the Victoria and Albert Museum by the Duke of Buccleuch, has been placed on exhibition in the woodwork galleries of the Victoria and Albert Museum (Room 54). The bedstead, with hangings and upholstery of crimson Italian brocade, enriched with gold fringes and ostrich plumes, is a typical example of the magnificent bedsteads which were made in England for Royal palaces and noblemen's houses in the latter part of the seventeenth century. Boughton House was rebuilt during that period by Ralph, Duke of Montagu, who was Ambassador to the Court of France at the time of Louis XIV. The decoration and furnishing of the house were completed by 1694, when William III. and his Court visited Boughton, and it was for this occasion that the bedstead is said to have been made.

Aircraft Dangers.

In a letter to the "Sunday Times" "Cavendo Tutus" states: "Having a refuge of solidly-built brick-arched underground cellars, with a heavily timbered roof and three floors of rooms superimposed, I feel a great deal of sympathy for the two million or so of women and children of this metropolis living in small tenement houses (often without cellarage), whose only protection against bombs, unspent shells and shrapnel items consists of a few flimsy boards and slate roofs. The Government is no doubt anxious to provide all the 'funk holes' they can for these unfortunates. The London, Chatham, and Dover Railway from Victoria to Snow Hill is, for a considerable distance, carried on substantial brick arches, many of which appear not to be used at all or merely as hiding places for lumber. If some of these were closed by brick walls on each side they would form admirable coverts for thousands of the poor inhabitants living near this line. Many other railway arches in London could be adapted for the like purpose. The rent and cost of constructing side walls ought not to be formidable." This suggestion may be paired, for its absolute unpracticality, with that of the correspondent who conceived the bright idea that dugouts should be formed in railway embankments.

Portsmouth Builders' Wages.

The Portsmouth branch of the Master Builders' and Building Trades Association have decided, after protracted negotiations with the United Trades Committee, to grant one penny per hour increase as war bonus to the trades affected, to take effect as from Friday, September 28 last, also that the question of wages be brought forward again for reconsideration in January, 1918, with a view (if the price of commodities necessary for maintaining the standard of life shows an appreciable increase) of revision in the shape of a further increase of ½d. per hour (war bonus) being made. The standard rate of wages per hour for carpenters and joiners, bricklayers, plasterers, masons, is now 9½
plumbers, 8½d.; painters, 7½d.;
general labourers, navvies, and build
labourers, 7d., with, in addition, a t
war bonus to date per hour of 2d.

War Workers and their Dwellings

A new Defence of the Realm Reg
tion gives the following power to
Minister of Munitions with reference
war workers' dwellings: "If as resp
any area in which the work of manu
turing, producing, repairing, storing,
transporting war material is being carr
on, the Minister of Munitions is of opin
that the ejectment from their dwellings
workmen employed in that work is cal
lated to impede, delay, or restrict t
work, he may by order declare the area
be a special area for the purpose of t
regulation. Whilst the order remains
force no person shall, without the cons
of the Minister of Munitions, take,
cause to be taken, any proceedings for
purpose of obtaining an order or dec
for the recovery of possession of, or for
ejectment of a tenant of, any dwell
house or other premises situate in
special area, being a house or premises
which any workman so employed is livi
so long as the tenant continues d
to pay the rent and to observe the ot
conditions of the tenancy, other than a
condition for the delivery up of poss
sion. If any person acts in contravent
of this regulation he shall be guilty o
summary offence against these reg
tions."

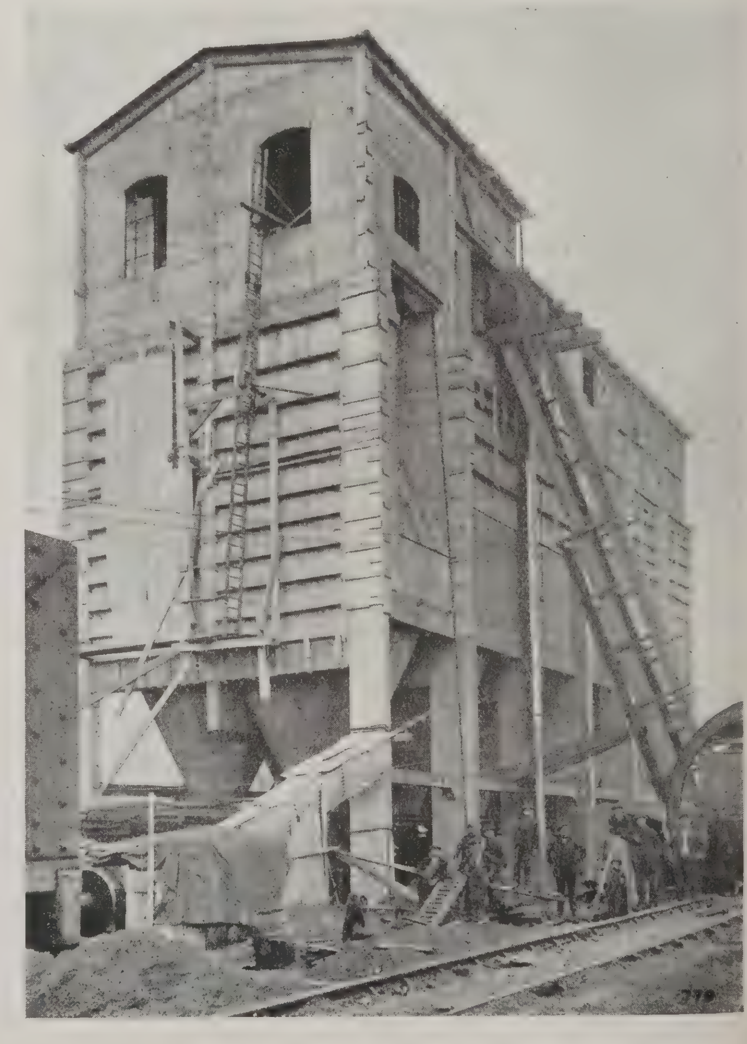
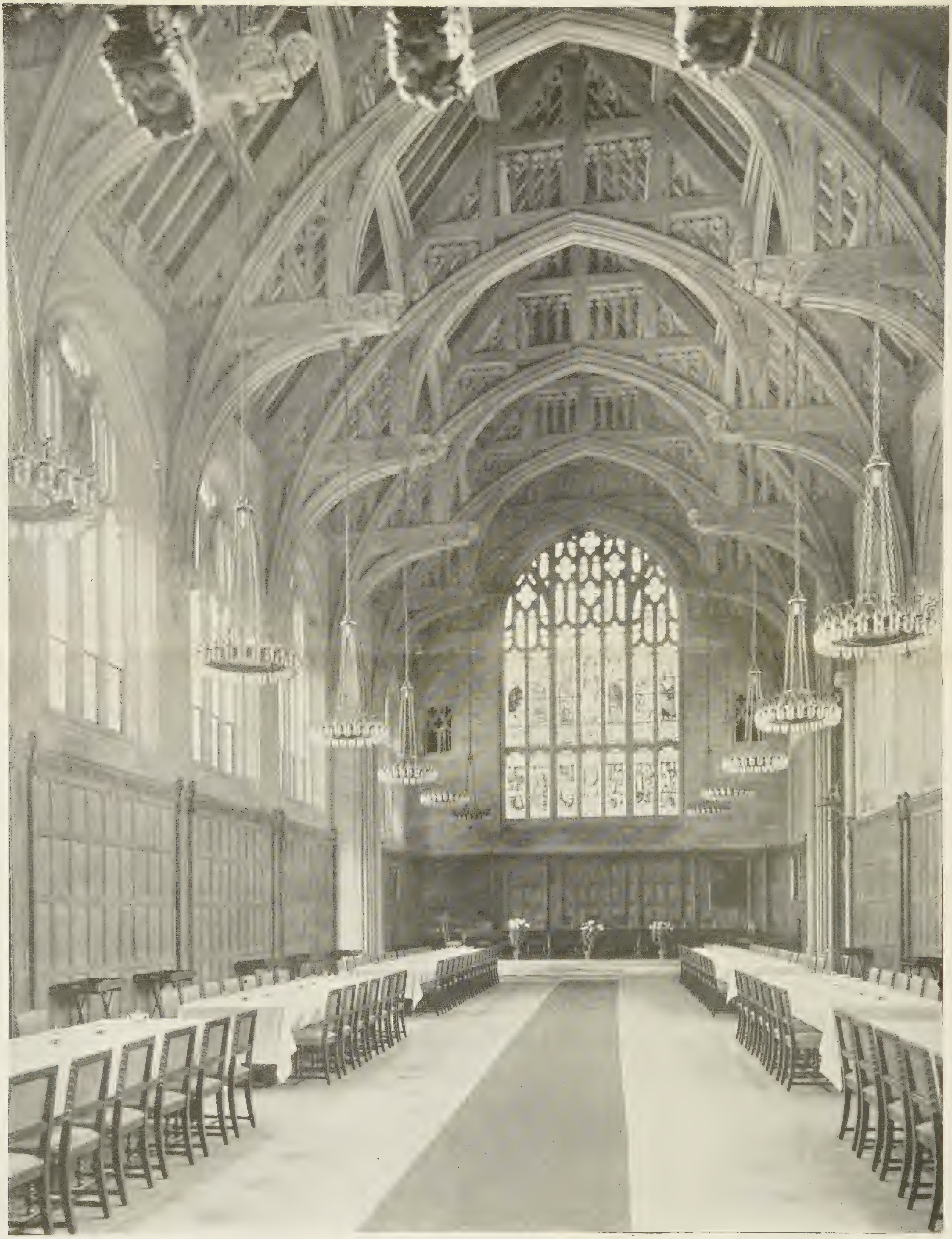
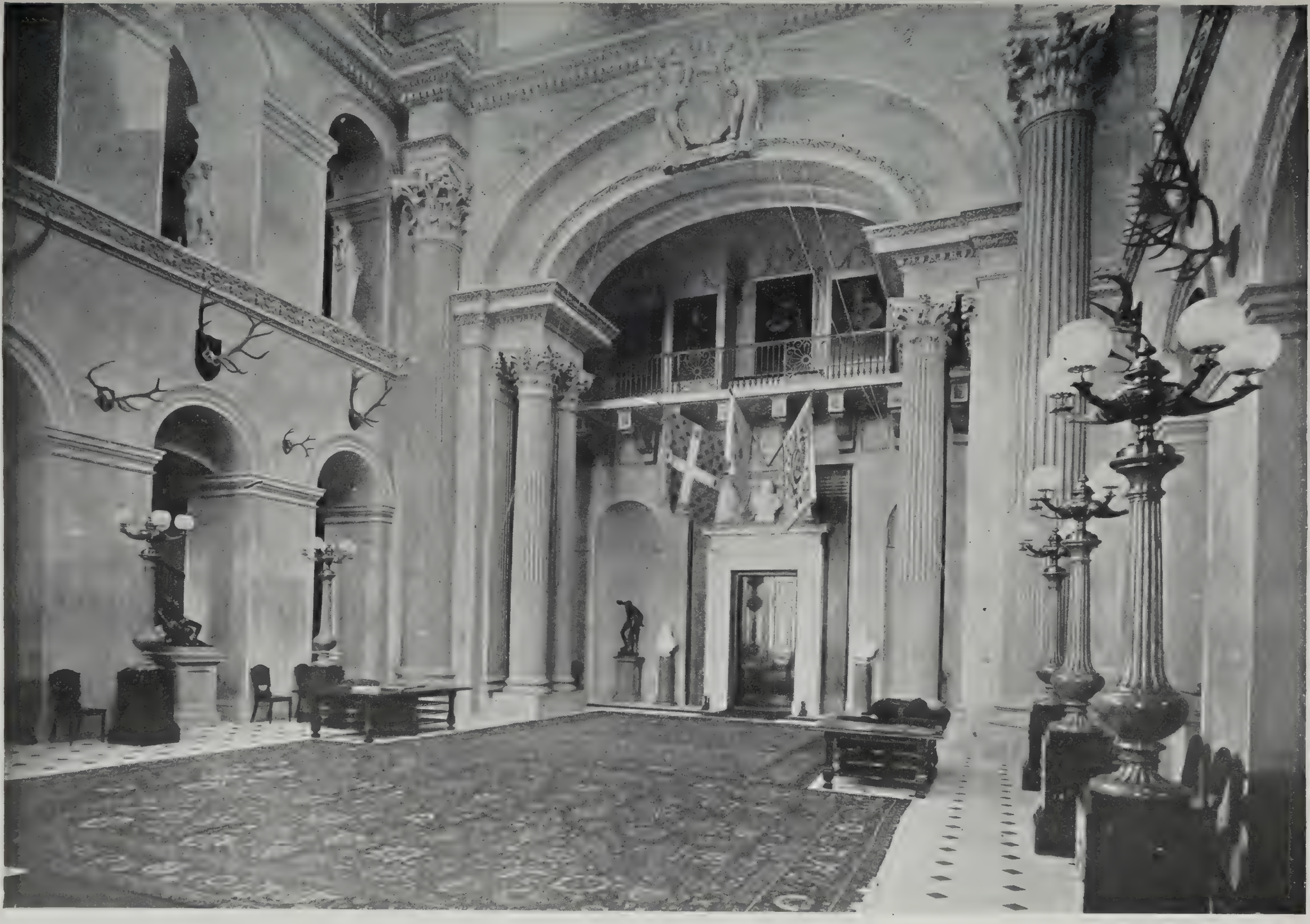


FIG. 3.—COAL HOPPER AT EBBW VALE, MON.



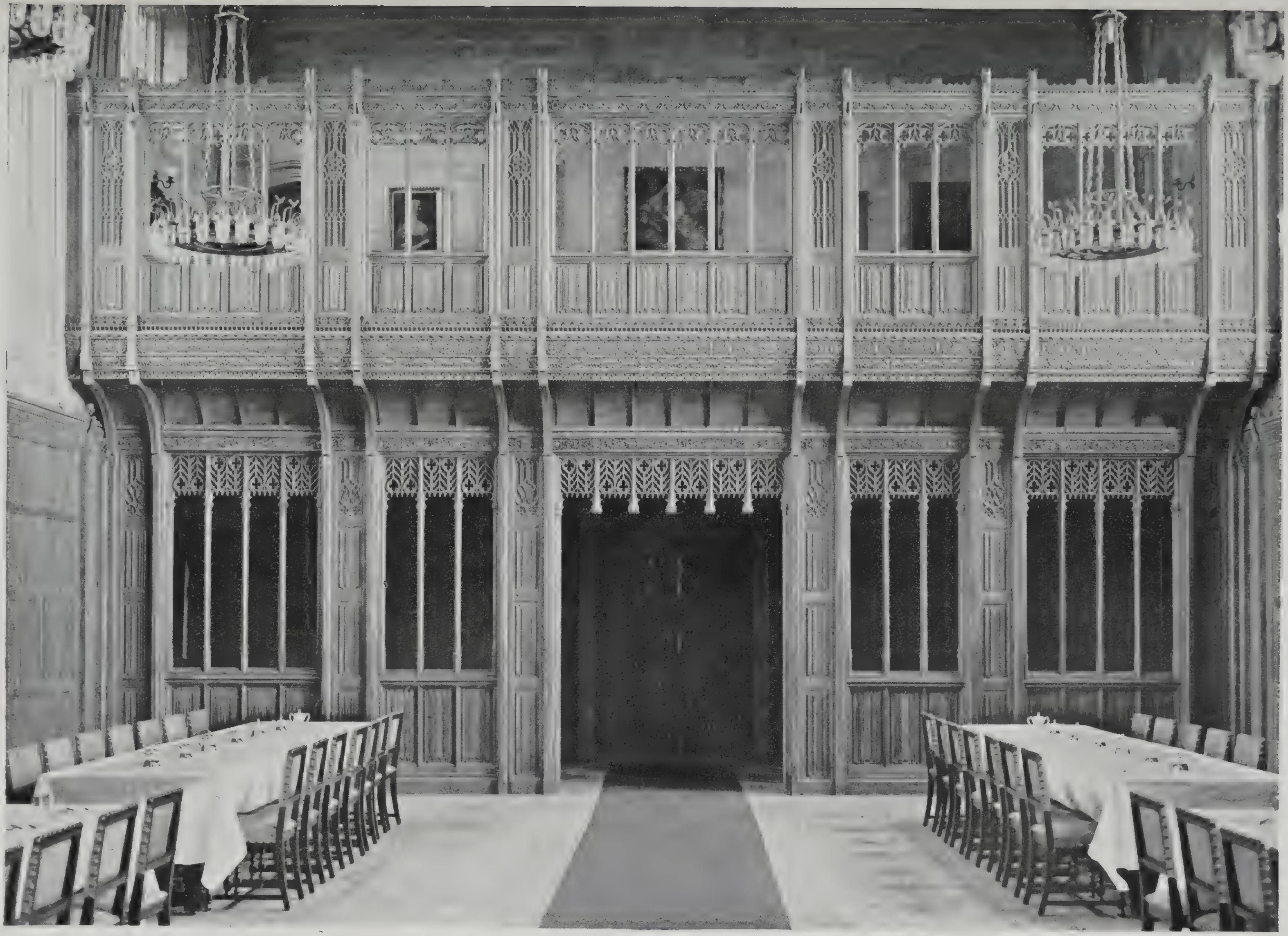
MODERN AMERICAN ARCHITECTURE (SERIES II.). XLIV.—GRADUATE COLLEGE OF PRINCETON UNIVERSITY, PRINCETON, N.J.: PROCTOR HALL, LOOKING TOWARDS HIGH TABLE.

CRAM, GOODHUE, AND FERGUSON, ARCHITECTS.



MONUMENTAL ARCHITECTURE (SERIES II.). XXIX.—BLENHEIM PALACE, WOODSTOCK, OXFORDSHIRE: THE GREAT HALL.

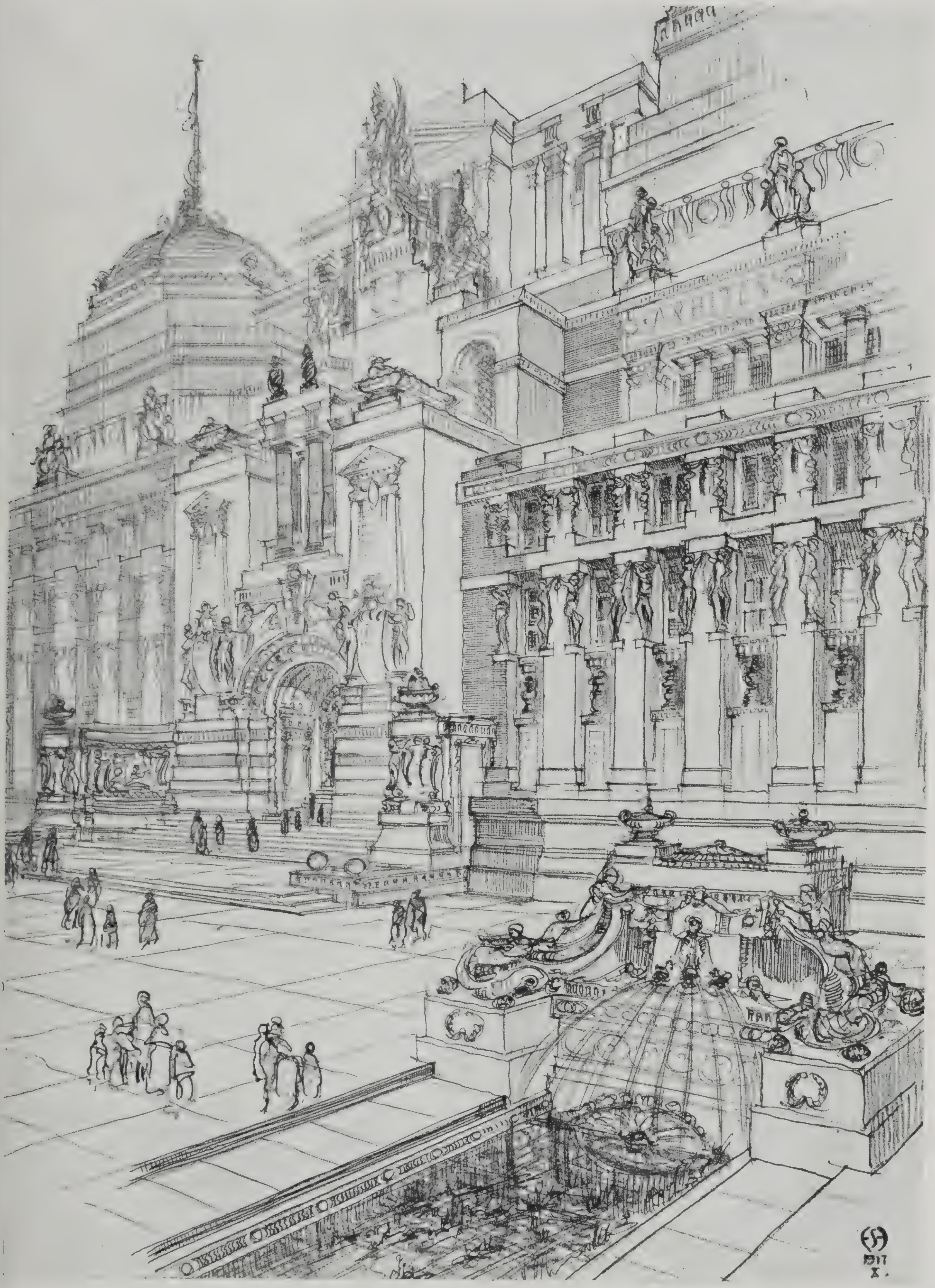
SIR JOHN VANBRUGH, ARCHITECT.



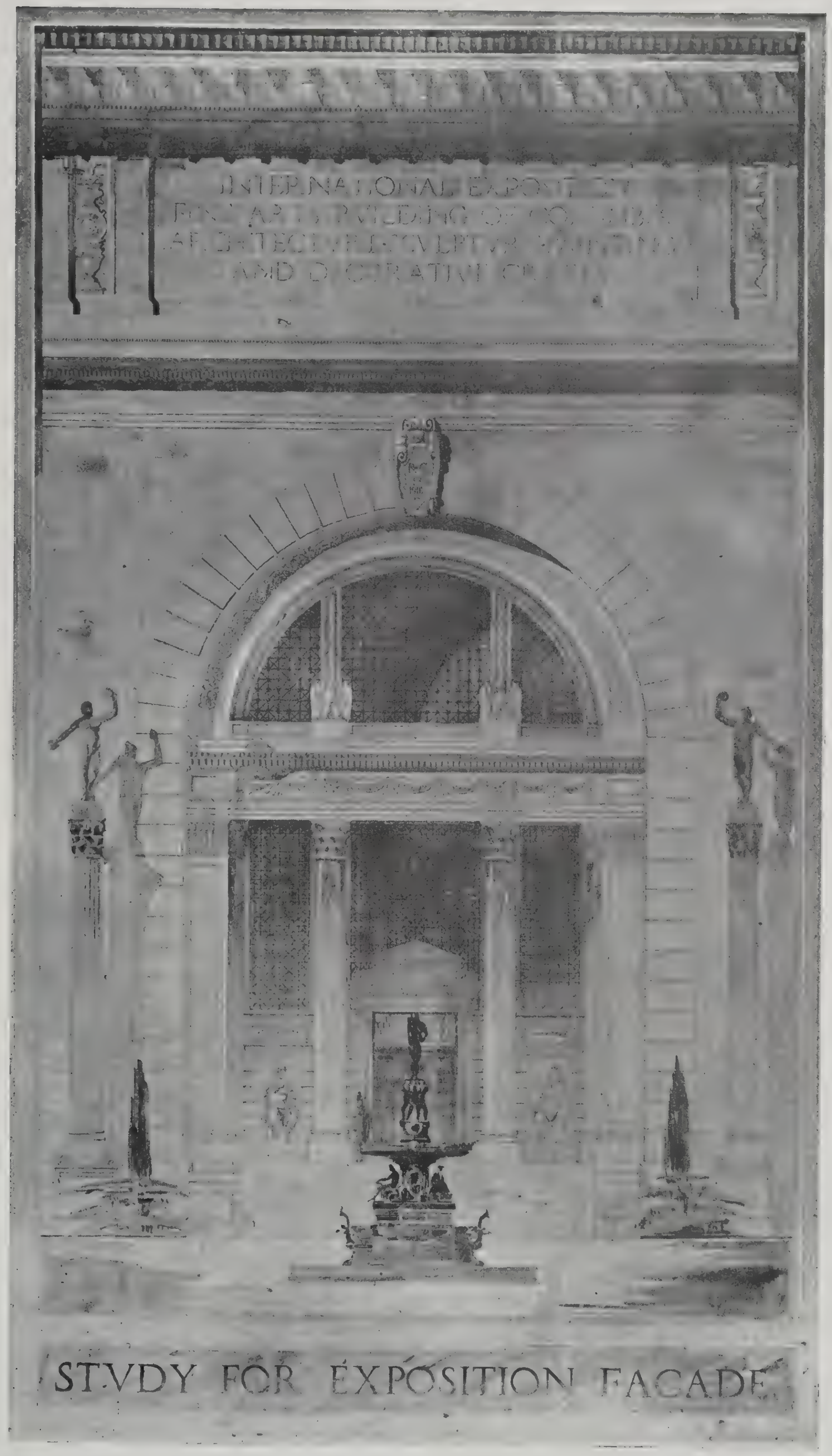
DETAILS OF CRAFTSMANSHIP (SERIES II.). XLIII.—SCREEN AT EAST END OF GREAT HALL, GRADUATE COLLEGE OF PRINCETON UNIVERSITY. PRINCETON, N.J.

CRAM, GOODHUE, AND FERGUSON, ARCHITECTS.

ILLINOIS



ARCHITECTURAL IDEAS.—VIII. BY AN ARCHITECT ON WAR SERVICE.


INTERNATIONAL EXPOSITION
FINE ARTS BVILDING OF CO[illegible]
ARCHITECTVRE SCVLPTVRE PAINTING
AND DECORATIVE CRAFTS
STVDY FOR EXPOSITION FACADE

STUDENTS' DRAWINGS (SERIES III.). IX.—STUDY FOR EXPOSITION FAÇADE. BY T. MEDINA.

(Liverpool School of Architecture.)

THE ARCHITECTS' AND BUILDERS' JOURNAL.

OCTOBER 24, 1917. TOTHILL STREET, WESTMINSTER. VOLUME 46. No. 1190.

NATIONAL PAPER ECONOMY.

ving to the very necessary Government restric-
on paper supplies, all elements of waste must
gorously excluded. Our readers, we are sure,
gladly assist in promoting this object, which is
em in national economy. They can co-operate
us effectually in either of two ways—(1) By
ng a direct subscription for this Journal, or (2)
acing with a newsagent an order for its regular
ery. Casual purchases—now here, now there—
e a serious discrepancy between supply and
nd, and cause a wastage of effort and materials
could obviously be reduced to a minimum but
the casual and erratic purchasing which we
stly ask our readers to avoid.

OVERNMENT intentions with respect to the
national housing scheme were in part revealed
on Saturday last, and they are indicated rather
hily in the semi-official communiqué on p. xiii.
announcement, however, tells us but little that is
or definite, except that the scheme will be con-
d or directed by the Local Government Board,
hat the houses will be standardised. Elsewhere
we reproduce the summary of recommendations
he report of the Housing Committee to
Council of the Surveyors' Institution. The
t is in many respects a valuable document. It
s within wieldy dimensions all the material
rs of the problem, and it deduces from them a
of recommendations that are commendable for
icial tone that is rather rare in housing utterances.
of these recommendations commend themselves
eir moderation, fairness, and general common
. If there has been published a closer approxi-
n to the truth about the housing question, we
not seen it; and the publication demonstrates yet
the capacity of professional organisations for
ring excellent national service on subjects on
they speak with authority and not as the scribes.
stances like that before us, any natural tendency
ds professional bias is nearly always corrected
e ruling passion for handling the subject with
ssional integrity—by a sort of professional pride
uracy of ascertainment, moderation of statement,
udiciousness of opinion. These merits are con-
ous in the Surveyors' report, which should afford
able guidance to statesmen deliberating upon
ousing question, and, indeed, to all persons who
to study it without prejudice, to get at the
rned and undistorted facts, and, in a manner, to
lt expert opinion upon them. That it is a purely
tial statement of the case is too much to claim
y document dealing, from an obviously special
of view, with any controversial subject. With
eservation, however, it may be said that this
is a remarkably fair statement of the case, and
commendations embody much practical wisdom.
of them have been anticipated in this Journal—
take a few notable instances, some form of appeal
st obsolete or unduly restrictive by-laws; the
g of national burdens from the shoulders of local
rities; the compulsory sale of building land at a
ice by owners who will not or cannot themselves
on it; and the placing of private owners on an
ty with local authorities with respect to Govern-
subsidies or loans.

It is unfortunate that the standardising of cottages should synchronise with premonitions of an industrial upheaval of unexampled magnitude. Those who are engaged in preparing model designs must be rather seriously embarrassed by the atmosphere of uncertainties that envelops their task. They do not know—and no one can foretell with any pretension to accuracy—what the labour conditions of the near future will be; nor to what extent the cost of labour and materials may falsify estimates; nor, again, in what direction the renascence after the war will change tastes and habits. They are, in fact, working very much in the dark, and their task is not an enviable one. A further handicap is the difficulty of imparting life and character to a mere model for imitation. A cottage, as we all know, should look as if it had sprung as a natural growth from the soil, not as if it had been imported and dumped; but how is a designer to secure harmonious effect when he has hardly the remotest idea, beyond an indication of the point of the compass, where his building will be put up? He will know, doubtless, whether he is designing for north or south, east or west, and whether for a mining district in the Black Country or for a smiling landscape in Surrey, and the knowledge will be to a certain extent helpful; but, even so, he must needs fall back on broad generalisations where familiarity with local colour is an essential condition of right design. And the plain fact of the matter is that this standardising business—a necessary evil, admittedly—will rob the country-side of its peculiar charm of vernacular architecture racy of the soil.

* * * *

None of those standardised country cottages will talk to you in the sweet or the uncouth but characteristic native dialect. They will be as unconvincing as a stage yokel whose improvised *lingua rustica* is a hotch-potch of several different counties, and whose unguarded moments reveal him as at heart an arrant cockney; or they will perhaps resemble Galton's composite photographic portraits, combining the most pronounced features of half-a-dozen persons with the net effect of a caricature. It is not clear, however, that standardising can be avoided; and it has certain obvious merits, which may be either negatived or turned to deft account, according to the degree of wisdom and skill with which the model designs are adapted to local conditions. We do not want to see a Surrey-type cottage put up in Lancashire because it is pretty, nor a Lancashire-type cottage adopted in Surrey because it is conveniently planned; and we should hate to see hybrids which would be conspicuously foreign to any district for which they were chosen. This wholesale building on emergency lines is necessary and inevitable; but the necessity is rather deplorable, and the exterior effects can hardly be much otherwise.

* * * *

To build parsimoniously, especially in the case of schools, is to deny art her true function; and if the London County Council persist in this course with respect to schools, they will sin against the light. Mr. W. Rothenstein, Professor of Civic Art at Sheffield University, has just issued, through Messrs. Constable and Co., "A Plea for a Wider Use of Artists and Craftsmen," which embodies a lecture delivered by him at Sheffield. What the true function of art is, he declares, "the Church and State and our public bodies have long since forgotten. All that remains of the long and fruitful encouragement of one of the first elements of the human spirit is a dim, mechanical sense that some place must be found for art in the City; and this is not so much because the creative spirit in man is recognised as being one of his chief glories, and is therefore to be generously acknowledged, but rather because the appreciation of works of art is regarded as a necessary element of general culture." It is against this false conception, or this blank ignorance, of the function of art, that relentless war must be waged. As Mr. Rothenstein indicates pretty clearly, artists themselves are in great part responsible for the public confusion of mind with respect to art, which has been too much glorified as a thing apart from common life, and is thus regarded by the generality, many of whom secretly or openly despise it for its supposed lack of "utility." But utility may be either contingent or remote, local or diffusive; and where the effect is remote from its cause the relation is imperceptible; and because "faith is the evidence of things unseen," and because the study of psychology and other impalpable entities has been grossly neglected, faith is feeble, and consequently the average man, while he may grudgingly admit that "a thing of beauty is a joy for ever," cannot perceive that it has any value beyond eye-service. That it penetrates much deeper cannot be conveniently demonstrated before committees, and hence the official scepticism which is operating so disastrously against the arts. If architects were less reluctant to enter public life, they could do fine educative work, and secure a reformation that it is almost hopeless to attempt from the outside.

* * * *

Mr. Rothenstein deplores the sad case of the town hall. It should be, he contends, "the symbolic centre of the life and creative industry of the whole neighbourhood; each succeeding year should add something to its completeness. The fabric of these buildings is," he acknowledges (and we thank him for a compliment which we trust and believe to have been well earned) "in most cases dignified and impressive, while within, its walls are cold and empty, and when we are honoured by the hospitality of our great corporations the welcome and the fare are generous indeed, but we look in vain for any visible sign in the objects of use and ornament we see about us of a living local culture and imagination." His plea for the encouragement of local talent may be easily misconstrued in too narrow a sense; but we may be quite sure that he is very far from advocating that parochialisation of art which so often results from a too delicate consideration of the tender susceptibilities of the local ratepayer; as if the main question was, Who gets the money, not what will be given in return for it. And that, indeed, is precisely the trouble with regard to the housing question. One might suppose, from the trend of the controversy, that the sole point worth considering is the distribution of the money, and that the design and construction of the houses were matters of relative unimportance; so hard is it to get rid of the sordid fallacy that money is more than money's worth.

* * * *

Factory builders are rapidly outgrowing this fallacy. In America, especially, business men seem to have realised quite thoroughly that mean building is poor policy—that "appearance" in a building counts for much. They have arrived at the conviction that a shabby building is as detrimental as a badly dressed commercial traveller; and as they have discovered that, after all, the traveller's internal furnishing is of more vital importance than his outward show, so also they have become fully aware that a respectable exterior to the factory can only achieve its object if the interior arrangements are of corresponding efficiency. It is not clear, however, in what order these agencies react on each other. For though probably the bagman was well dressed before he was well educated, it may well be that the architectural treatment of the factory exterior was an afterthought supervening on the introduction of scientific planning and equipment. In any case, *bon chat, bon rat* holds good, and the proverb has a rather special application to the workers. Manufacturers have ascertained that it pays to treat them well—to pay them good wages, and to make their environment not merely healthy but comfortable and pleasant.

* * * *

Somebody should write a history of town-halls. It would make a large but entertaining and instructive book; and it could be copiously illustrated with examples ranging from the ancient moot-hall in the market-place, with stocks and whipping-post underneath it, and cockpit and bull-ring adjacent, to the latest addition to the long list—that at Denbigh, upon whose elaborate ceremonial inauguration we commented a week or two ago. One is sometimes tempted to suppose that the old traditions of sword-and-buckler play, bull-baiting, and other rude sports of our ancestors, still cling like an atmosphere to the modern town-hall. Else what were the force of the standing heading to certain borough council meetings—"The Local Bear Garden"? As an arena for fierce wordy combats, the town-hall is unexcelled; and it is a prudent precaution that the seats in the council chamber are, as a rule, firmly attached to the floor, which should be sumptuously and softly carpeted. For the reason for this recommendation the perplexed reader may be referred to the historical incident which has immortalised the name of Jenny Geddes, and procured for her an abiding memorial in the cathedral of St. Giles, Edinburgh. Large accessions of lady councillors are likely to take their seats in the town-hall of the future, and those seats should be less easy of use as missiles than was the too portable three-legged stool which the redoubtable Jenny (or Janet, as the memorial calls her) converted into so convincing a theological argument.

* * * *

In commenting last week upon Mr. M. H. Spielmann's article on booksellers' signs, we expressed regret that the London County Council, as an educational authority, should have done so little towards practising what they preach in relation to craftsmanship. Their arts and crafts schools are doing excellent work; and even in some of their elementary and "central" schools there is admirable tuition in the rudiments of applied art. But how much more effectual the teaching would be if it were supported by evidences that such studies are not sterile!—by outward and visible signs that the Council themselves value the products of skilled craftsmanship. In this respect the Council are very poor exemplars, and are like to become worse, if it is indeed true that they are about to build schools that are to be denuded of all embellishment. We would again plead with them that they should carefully reconsider this matter. In the first place, they owe it to themselves not to stultify their teaching, not to discredit good precept by poor practice. Further, they are under a moral obligation to take the larger view in such matters. Surely they must see that a policy of stinting and starving and stunting is, in its ultimate issues, uneconomical to the last degree—is penny-wise and pound-foolish. To put the matter on the lowest ground, it does not pay to provide teachers and pupils with an environment that would suggest to them at every turn that education is a grim necessity, from which the education authority are anxious to come off as cheaply as possible.

HERE AND THERE.

GREAT statesman should not write frivolous
rhymes. They may be remembered against
him when all else that he did is forgotten. When
ss, as I do almost daily, Westmacott's bronze
ie of Canning on the west side of Parliament
are, it is not any outstanding act of statesmanship
s that I recall, but his humorous verse, his "Needy
egrinder," and other exhilarating pieces in the
ti-Jacobin" and the "Microcosm." "The Loves
ie Triangles" he wrote in conjunction with two
rs—triangular collaboration. One remembers, too,
luel with Lord Castlereagh, whose conduct of the
Canning assailed. It is surely a very odd reflec-
that duelling was in vogue in 1809, when these
statesmen had it out in the gentlemanly way on
ey Heath, where also William Pitt and George
ey had, some years previously, engaged in similar
te. That American writer on ethics who held
we have not yet emerged from barbarism,
ugh we fondly think we have, would seem to be
e right of it; although our politicians have virtually
n up duelling, their talk about it usually coming to
ing, I seem to remember reading of a recent bout
ticuffs taking place between two gentlemen of the
se of Commons in this same Palace Yard, and I
arbarous enough to have been exhilarated by it
er than shocked. This incident no doubt scandal-
the delicate mind of the Boche, who loses no
rtunity of unctuously sermonising on our invete-
habit of punching each other's heads on due provo-
n: his "kultured" resentment of offences being
y illustrated in drawing the sword on an unarmed
crippled cobbler, and in various other ways with
h we have recently become acquainted, to the
t advancement of our knowledge of German
hology.

* * * *

I glanced at the statue of Canning the other day,
sweetly solemn thought that sprang to mind was
odied in Canning's couplet—

> n matters commercial, the fault of the Dutch
> s giving too little and asking too much"—

use Holland happens to have become topical
in the past week or so with respect to its traffic
the Huns. It has "barged in," as the schoolboy
se goes, with too plentiful a supply, *viâ* its canals,
e wherewithal to make the concrete fortifications
out whose adventitious aid the Huns would long
his have been in full flight towards Berlin, hard
ed by our impatient cavalry. Sand and gravel,
pears, have been supplied in enormous quantities
ie guileless Dutch to the wily Hun, who said that
anted these things not for making concrete
ices, but for the repair of Belgian highways. A
likely story. But, as a writer in the "Observer"
said, "The story of the mutiny in the German
has been received with a certain amount of
cion; and the fact has much significance. It
is that the official word of Berlin is so discredited
we hesitate to believe it, even when its tenor is
table and appearances are in its favour. We are
approaching that critical moment when we shall
nger credit the Germans even when they say they
elling lies." That is only too true, and it is
rently reminiscent of the old logic-twisting tag
ed of undergraduates: "If I say I am a liar, and
elling the truth, then I am no liar," and so forth.

* * * *

not Holland a queer country? Voltaire said of
iat she is a land formed from the sand brought up
ie sounding-leads of English sailors, but, says
Playfair, to whom I am indebted for the funny citation from Voltaire, "she is actually created from the *débris* of Swiss and German mountains brought down by the Rhine." It is only for lack of opportunity that the Boche has hitherto refrained from making this physiographical fact an excuse for annexing the Netherlands wholesale, instead of getting his own back in barge-loads. No doubt he is getting his "false-work" from Sweden. One is very sorry for the friction with Holland. She is such a great little country, with an almost incredibly extensive commerce, considering her size—one-tenth of the area of the United Kingdom. Playfair would have it that the secret of her prosperity is the high state of education among the people. "In the primary schools of Holland a wide foundation is laid for practical purposes in the attention given to science. Beyond this primary instruction, there is a complete scheme of technical education, not only for workmen but also for the foremen and managers of works. The law compels every town of ten thousand inhabitants to erect technical schools. In these, working men receive systematic instruction in mechanics, natural philosophy, chemistry, natural history, technology, agriculture, geography, history, the native language, political economy, freehand and mechanical drawing, and calisthenics. Above these are the higher technical schools, of which there are [Playfair was speaking in 1870] thirty-two in Holland—twelve, I believe, being supported by Government and twenty by municipalities. In them are 2,500 pupils, who pass through a course of five years, about one-third of it being devoted to the study of the exact sciences, one-third to the political, mercantile, and historical sciences, and one-third to their own and at least two foreign languages. When you go into a shop in Holland you feel quite secure that the shopkeeper will speak either English or French, and generally both. Such liberal salaries are given to teachers that they are readily obtained. Need I say one word more in explanation of the causes which make Holland an industrious and a prosperous nation, in spite of its small area and poverty in industrial resources?" No, m'lud. Enough said to account for her prosperity, for her very respectable output in art (in Holland, as I learned from this Journal a few months ago, everybody learns to draw), in literature, and in scientific discovery, and for that keenness in commerce which Canning labelled for all time "the fault of the Dutch."

* * * *

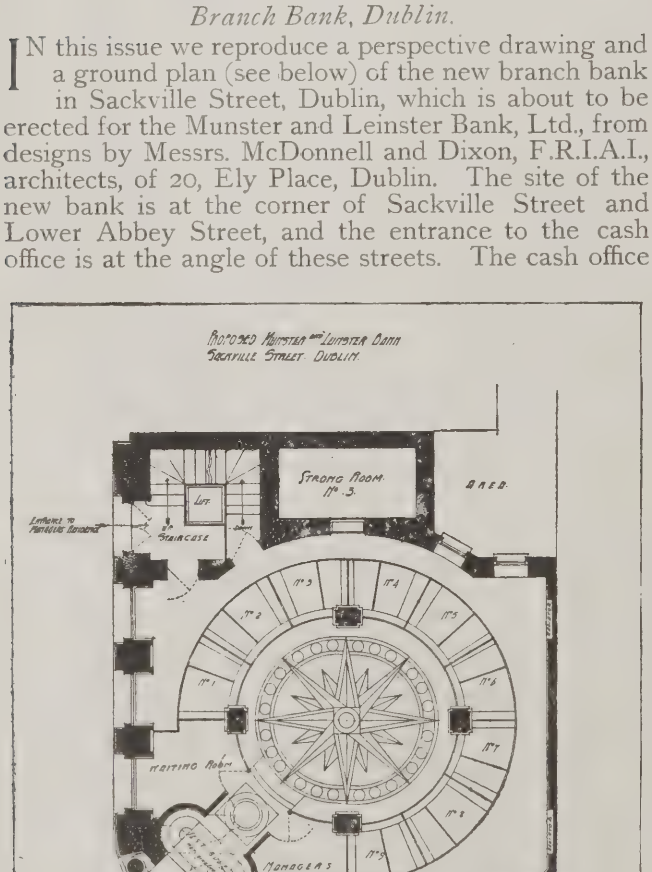
To return to Canning. We all hope that ere long he will have, in his little oasis of verdure in Westminster, as a companion of his statuesque solitude, St. Gaudens's statue of Abraham Lincoln. They will enjoy each other's society; for both hated tyranny and loved a joke, and both were kindly natured men. Year after year I have noticed that the sparrows have made a nest under Canning's right arm, and I was glad to see that it was not disturbed. I can fancy that Canning's shade enjoys the sight. With their passion for tidiness, and with that craze for cleanliness which Mr. Will Crooks once said was the most depressing attribute of workhouses, the Dutch would have ruthlessly swept that nest away, and the act would have been as sinful as the refusal of hospitality to the birds who would build in the stackpipes on churches. Seeing those wirework cages designed to keep out birds, the gentle St. Francis would achieve his nearest approach to a frown, unless he chanced to reflect that his feathered friends were really being protected from the "billowy grave" that ended the career of the hero of "Tit-willow." Not but what an occasional cleansing of our statues (which seems to be nobody's business in London) would be beneficial. Sir Henry Irving's delicate lineaments, in the Charing Cross statue, are encased in a mask of soot, as if he had newly made up for Othello: " Haply for I am black—— " More than that: the statue rather illustrates an observation I once heard the late Canon Barnett make about the excessive thoroughness of a certain lady: " If she were going to play Othello, she would blacken herself all over."

Although the Charing Cross statue of Irving is, on the whole, rather fortunate in its site—it is in the heart of Theatreland, and the statue has a comprehensive view of the booksellers' shops the scholarly actor loved to haunt in his hours of leisure, going into them with the intention of spending five pounds and coming away with a receipt for fifty—it is not well lighted, and that may partly account for the negroid appearance which is so flagrant a contradiction of Irving's habitual pallor. But I, for one, hope that it will never be removed, unless Time, the great scene-shifter, removes the booksellers and the theatres from Charing Cross. Statues are notoriously peripatetic; but it were pity to see the great tragedian resume his earlier character of "walking gentleman." It is odd that the district should hold one of the best of the several statues of Irving, and (in Leicester Square) the worst possible statue of Shakespeare. But if statues are put up in the reasonable expectation that sooner or later they will be moved elsewhere, why not provide them with chariot wheels—or at least castors! DIOGENES.

THE PLATES.

Branch Bank, Dublin.

IN this issue we reproduce a perspective drawing and a ground plan (see below) of the new branch bank in Sackville Street, Dublin, which is about to be erected for the Munster and Leinster Bank, Ltd., from designs by Messrs. McDonnell and Dixon, F.R.I.A.I., architects, of 20, Ely Place, Dublin. The site of the new bank is at the corner of Sackville Street and Lower Abbey Street, and the entrance to the cash office is at the angle of these streets. The cash office is entered through a vestibule, which gives acces circular space, around which are the counter an various desks for the staff. This arrangeme rather novel, and it has the advantage of ins ample light behind the counter and a clear space f public. Four columns are carried up from the co for constructional purposes, and they support an dome filled with brilliant mosaic glass, illuminat the day time, by transmitted light from the mezz windows, and at night by electric light outsid dome. The basement contains the larger s rooms, lavatory accommodation for the clerks The upper floors are devoted to a residence fo manager. The exterior will be faced with Irish granite and Portland stone dressings.



NEW PREMISES FOR THE MUNSTER AND LEINSTER BANK. SACKVILLE STREET, DUBLIN: GROUND-FLOOR PLAN. McDONNELL AND DIXON, F.R.I.A.I., ARCHITECTS.

Sarcophagus on the Wellington Memorial.

The sarcophagus on the Wellington Memorial Paul's Cathedral, together with the recumbent of the Duke, is executed in bronze throughout. the design of his detail, Alfred Stevens departed considerably from conventional architectural m Indeed, very little of it can be traced to a strictly tectural origin; and for this reason, perhaps, it the more interesting. In any case, the beauty vigour of it cannot be denied. Stevens was a crying in the mid-Victorian wilderness. That d a period which is chiefly remarkable for its exec taste and the poverty of its artistic achieven Stevens should have produced what is unive admitted to be a masterpiece of monumental desi probably the most extraordinary phenomenon c art history of modern times.

A Steel Dog-grate of the Eighteenth Centur

The steel dog-grate illustrated in this iss included in the collection of eighteenth-century n work at the Victoria and Albert Museum. Ir grace of its proportions and the delicacy of its ir detail, we may detect unmistakable evidence o influence of Robert Adam, though, so far as w aware, there is nothing to prove his authorship.

Architectural Ideas in War Time.

This drawing shows an architectural compo set, apparently, amid the rocks of a mountain fas Below, steps lead up through rough boulders t lower entrance archway, while curving aroun either, built out from the living rock, broad roa converge upon a higher level. Above, and fillin space between the heavy masses which rise on side, runs a colonnade of coupled columns, mounted in the centre by a monumental gro statuary.

An Adam Fanlight.

Of all the designs of Robert Adam, those fo lights are perhaps the most delightful. About cobwebs of metalwork there is a fascinating that exercises its spell over all observers. With simple elements—the semi-circle, the circle, the the scroll, the acanthus, the honeysuckle, and so —Adam invented fanlights in amazing variety. times he would concentrate the interest within a paratively small radius, allowing his spokes t direct to the outer circumference, with perhaps cobweb to link them up at the top. At other would divide his fanlight off into a series of irre spaced semi-circular compartments, and fill the intervals with bands of varied design—sometim loose and sometimes of close texture. Over this of design he had a wonderful mastery, and we s be thankful that so many of his fanlights are sti served to us in the doorways of West-end house elsewhere. The example illustrated on the d page plate in this issue is now in the Victori Albert Museum. It was designed for the Hall Worshipful Company of Drapers, London.

"THE ARCHITECTURAL REVIEW."

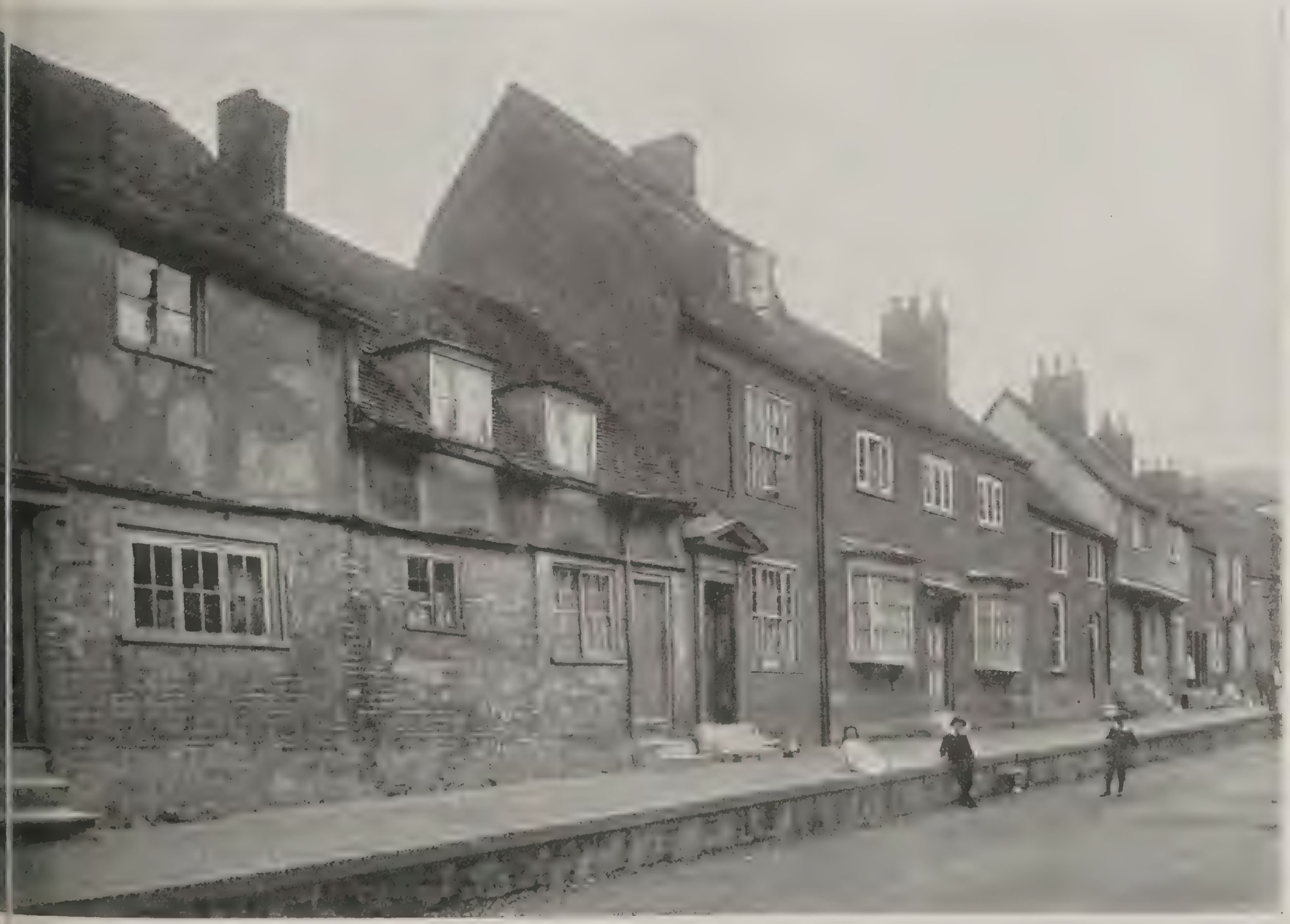
HE October number of the "Architectural Review" contains many features of topical interest. That which will probably attract most ntion is a reproduction of the Lincoln Memorial at cago by St. Gaudens. It was a replica of this fine work that, in the first instance, the American ce Centenary Committee proposed to send to land for erection upon a site near Westminster bey. The circumstances of the slight contretemps ch arose when, later, it was decided to substitute a ue by the sculptor Barnard, are familiar to every- y. Readers of this Journal will remember that, in menting upon the controversy which has, perhaps ewhat regrettably, arisen, we suggested that both ues might well be accommodated in this country. ainly there is no dearth of vacant sites. Whatever be the merits of the Barnard statue, we feel quite fied, after seeing this reproduction, in saying that ny case the St. Gaudens statue must not be lost to Without question it is a great work of art. It is ll-length study of Lincoln, who stands grasping in eft hand the lapel of his coat, his head slightly ed, on his face an expression of mingled tender- and sorrow. All the fine characteristics of the t American seem to be embodied and expressed is statue by St. Gaudens. Certainly we must have hatever else happens.

nother feature of great topical interest is an illus- ed article on "The Working-Class Housing blem and its Solution," by Mervyn E. Macartney, , F.R.I.B.A. Mr. Macartney deals very ably and uctively with the questions of Design, Planning, struction, and Cost. He maintains that an econo- l solution is only to be found in the adoption of dard plans and designs. He demonstrates the fallacy of the contention that standardisation must necessarily make for monotony by showing alternative elevations (by Mr. J. J. Joass, F.R.I.B.A.) for the standard plan which was adapted by Lieut. Holloway from the Evesham Rural District Council's Housing Scheme. These elevations show considerable variety both in material and treatment, and should effectually dispose of the "monotony" argument. Further evidence in support of his thesis is provided by the instance of the Whiteley Homes, Burhill, Walton-on-Thames, where a number of eminent architects, including Mr. Macartney himself, Mr. Reginald Blomfield, R.A., Mr. Ernest Newton, A.R.A., and Mr. Walter Cave, were given a standard plan to work upon, and succeeded in producing an astonishing variety of elevational designs. Mr. Macartney's article is a remarkably concise and able survey of the whole subject, and it should be read by all who are interested in this vital problem of housing.

In this issue, also, a number of illustrations are given of the memorial to Mary Baker Eddy, the founder of Christian Science, recently erected in Mount Auburn Cemetery, Cambridge, Mass., from the designs of that eminent American architect Mr. Egerton Swartwout.

The concluding part is given of Mr. A. E. Richardson's delightful article on "Small Houses and Cottages at St. Albans," from which the illustration below is taken. Mr. Richardson insists that, with the problem of economic building facing the Government, such charming examples of the past cannot be ignored.

Under the title "Illumination and the Architect," a useful statement is given of the principles underlying scientific lighting by electricity. Current architecture is represented by Mr. G. Gilbert Scott's interesting church at Stonycroft, Liverpool.



COTTAGES IN FISHPOOL STREET, ST. ALBANS.

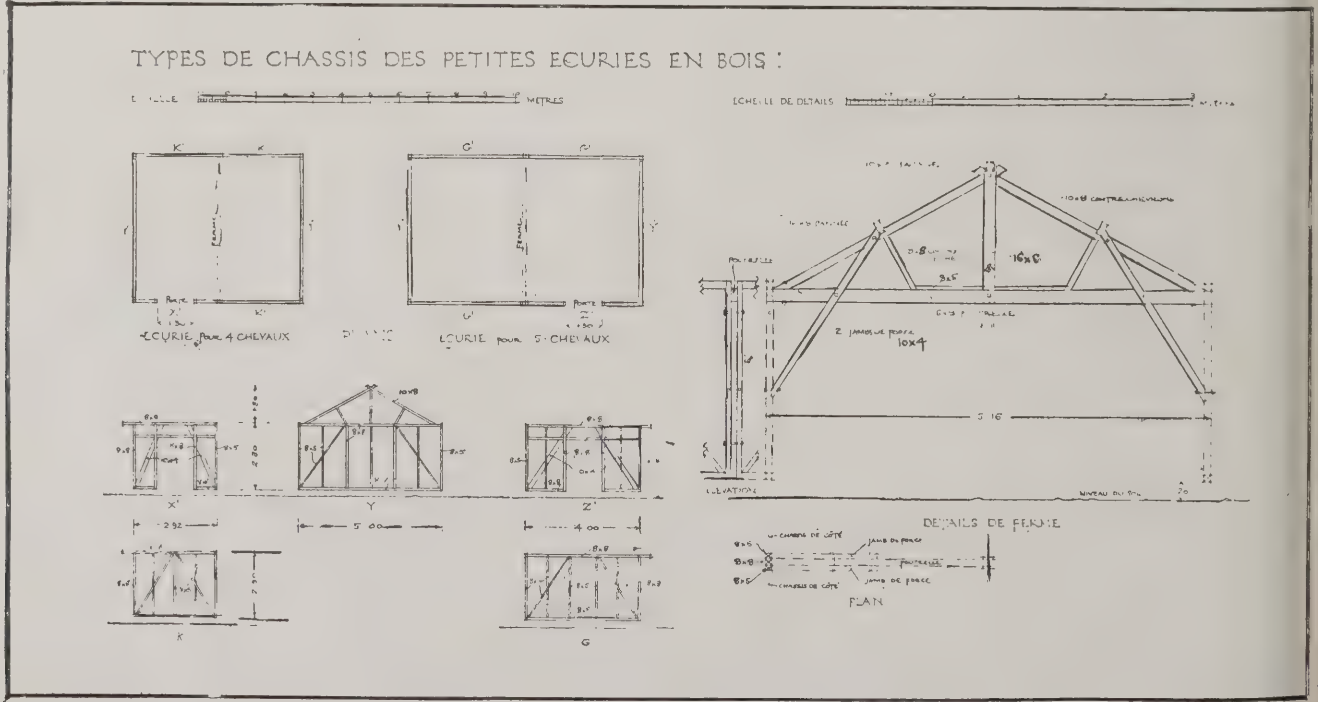
WAR·BVILDINGS·SECTION

RE-HOUSING IN DEVASTATED FRANCE.

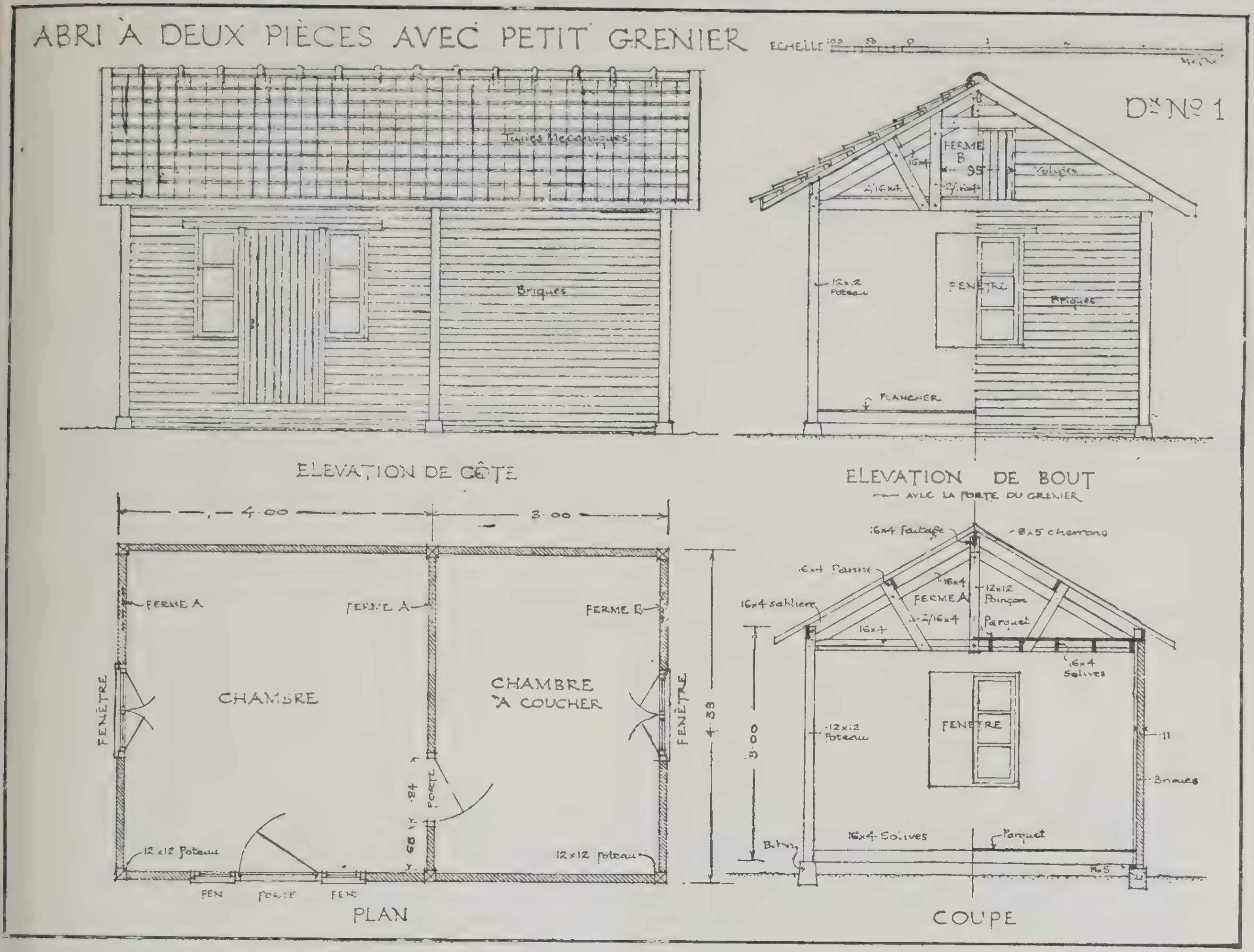
UNOBTRUSIVELY, but none the less thoroughly and efficiently, the Society of Friends, ever since the outbreak of hostilities, has been actively engaged upon large programmes of work in connection with the war, not only on behalf of the civilian populations of war-devastated territory, but in other places where any sort of distress has been experienced. The Society is strongly represented in France, Russia, Holland, and elsewhere, and in each case much useful work has been accomplished. In France in particular large schemes of re-housing and reconstruction have been undertaken. We learn from a pamphlet which has been reprinted from "The Friend" that schemes of rebuilding in the departments of the Marne and Meuse, upon which the Society's War Victims' Relief Committee has been engaged for the past two years, are now practically complete; the moment is opportune, therefore, for a short account in these pages of the work which has been accomplished.

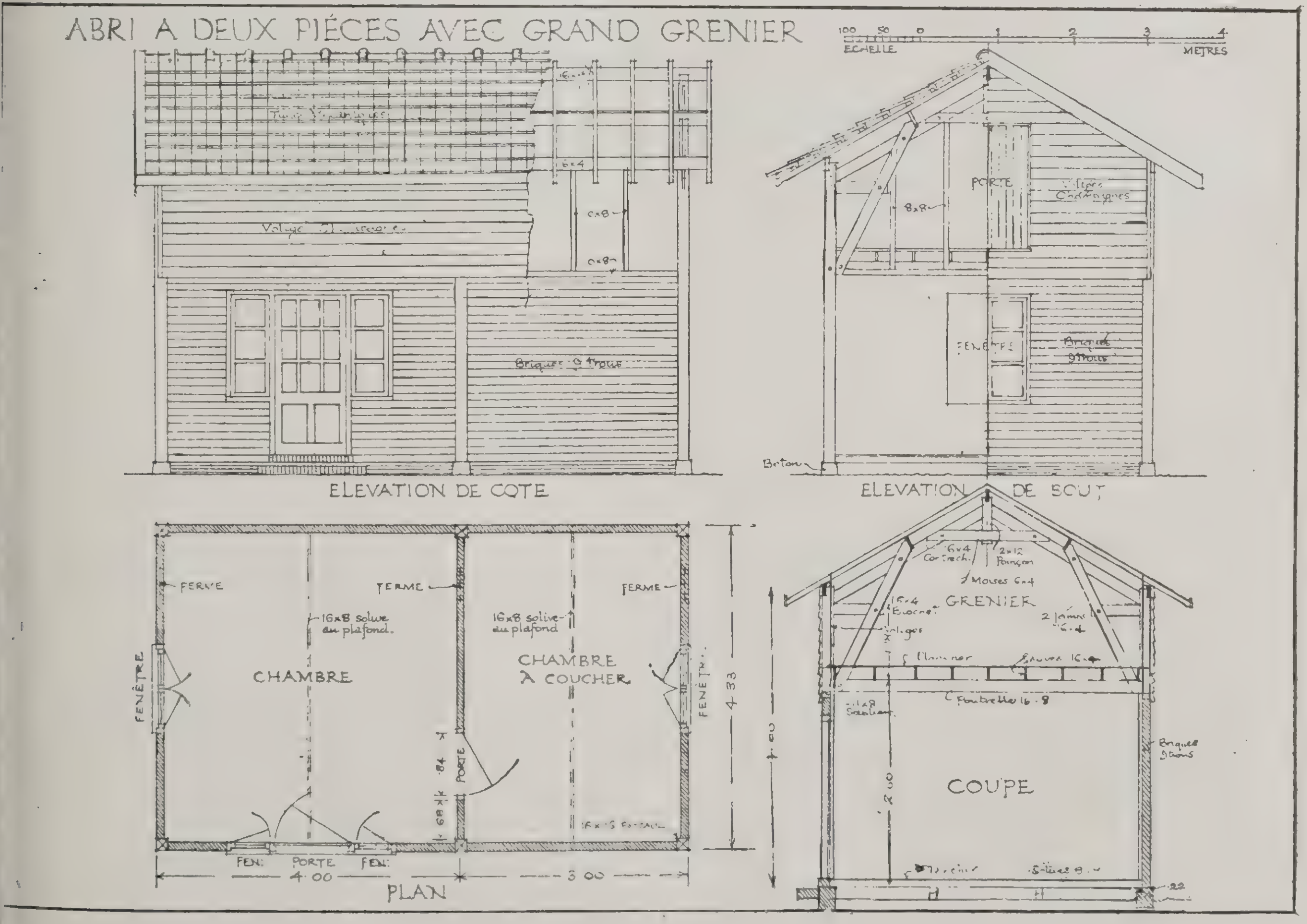
The Western Marne and Aisne.

When, at the end of 1914, the F.W.V.R. Expedition first entered the devastated villages of the Army zone, the efforts of the building groups were directed t repair of farmhouses which had damaged by fire and bombarde during the battle of the Marne. T villages of the Western Marne and were built chiefly of brick and stone sufficient of the walls of the building often remaining to carry a temporary over a part of it, which, with the inse of new doors and windows and some floors, gave enough shelter to enabl farmers to return to the cultivation of land. The provision of stabling ac modation for horses and cows was al as pressing a need as the housing o



TYPES OF WOODEN STABLES ERECTED IN THE DEVASTATED AREAS OF FRANCE.





TYPES OF SMALL COTTAGES ERECTED IN THE DEVASTATED AREAS OF FRANCE.

people, if the land was to be cultivated, and the repair of stables was therefore undertaken at the same time. For this early work, both materials and labour were the gift of the Society. During four or five months, with two small groups of workers helped by some French labour, twenty-two houses were repaired at an average cost of about £15, giving shelter to about seventy persons, in addition to the restoration of fifteen stables.

The Eastern Marne and Meuse.

In the spring of 1915 permits were granted which allowed work to be begun in the villages of the Eastern Marne and the Department of the Meuse. Here the problem was of quite a different character. The villages, built almost entirely of timber-framed houses filled in wtth plaster and mud, had in many instances been practically razed to the ground during the invasion. Repair was impossible, and the only practical way of housing quickly and economically the large numbers of homeless people was by the construction of wooden huts.

In co-operation with the departmental authorities, by whom the materials were provided, work was soon begun in the devastated villages between Vitry-le-François and Bar-le-Duc, extending from Glannes and Huiron in the west to Laheycourt in the east, a distance of nearly thirty miles. The frames for the huts were made in workshops in four different centres, and sent for erection by groups of builders in the villages. Eventually work was done in twenty-three villages, 358 huts being built at an average cost to the Department in material only of £27 per hut, and housing 1,267 persons at a cost of about £7 10s. per person. The total cost to the French authorities of this work was 270,400 fr., or about £9,650, the labour, costing about 33 per cent. in addition to these figures, being the gift of the Society.

Maisonnettes and Garden Villages.

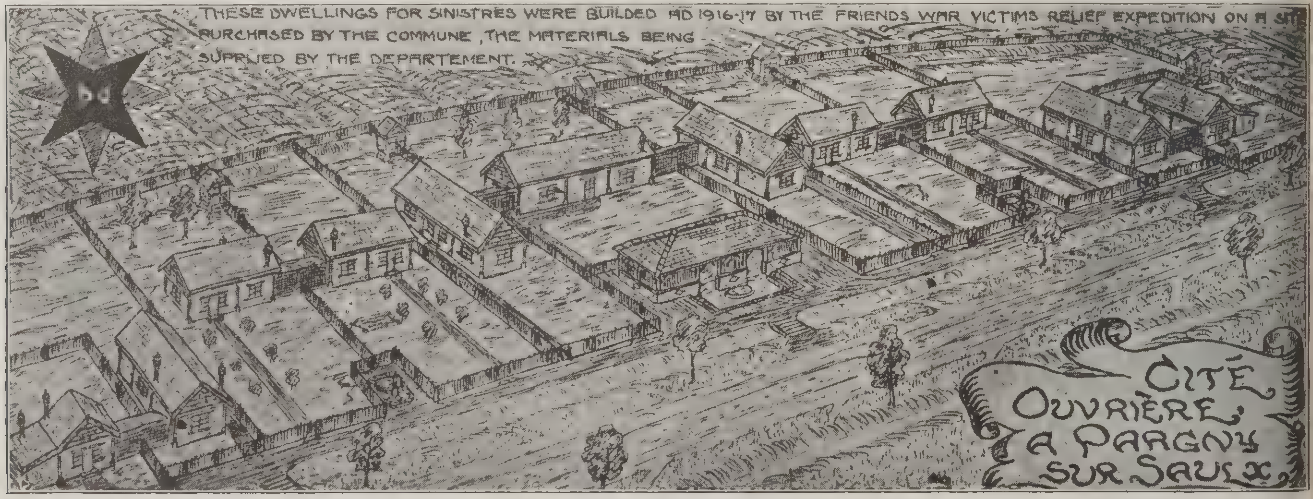
Towards the end of the Society's work in the Marne and Meuse, owing to the high price of timber, the demand for a more permanent house, and the proximity of large brickfields, a small type of maisonnette was introduced, and of these seventy-five have been built in eleven villages, including the cités at Sermaize-les-Bains and Pargny-sur-Saulx, the former containing twenty-four houses and the latter eleven. These two groups of houses were built on garden village lines, and drains, roads and fences were part of the schemes. The seventy-five houses cost in materials and bricklayers' labour about £4,000, or £53 10s. per house persons being housed at a cost of £1 per person.

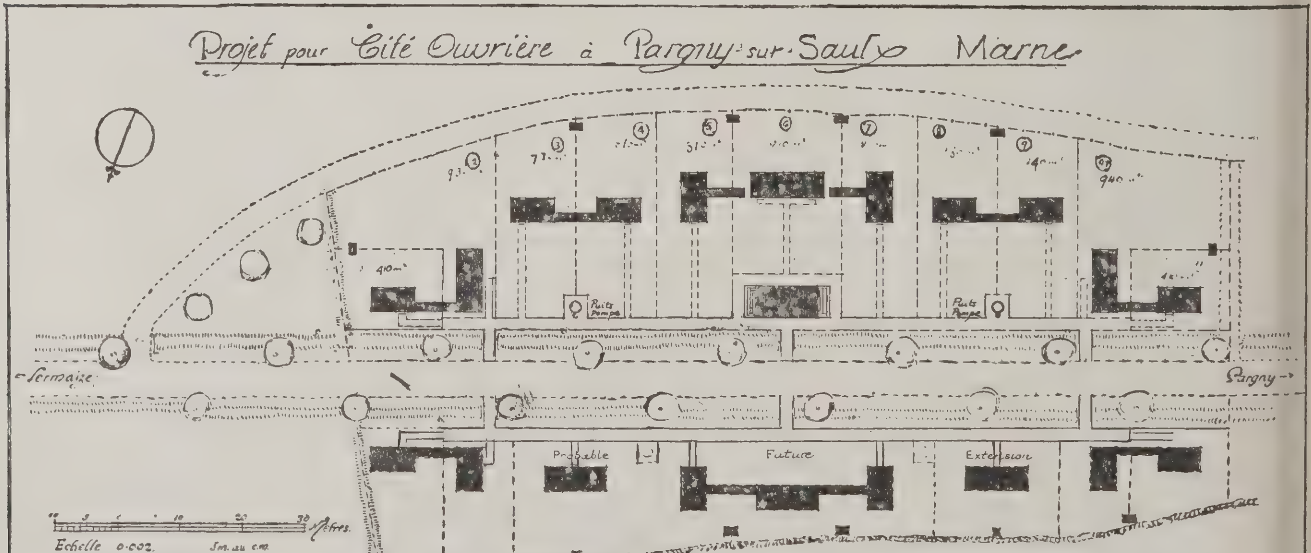
From these figures it is evident tha cost to the Society's funds for bui work is no criterion of the material of the work done, which, exclusiv labour, has cost nearlv £14,000, an clusive of labour about £20,000. chief value of the work has, neverth lain in the prevention of disease, must necessarily have followed up prolonged stay in cellars, stables, other unhealthy places.

In addition to the work outlined a the Sermaize Hospital has been bu school at Huiron, and eleven wo stables; alterations and additions t hospital at Bettancourt Château been carried out, and some help has given in the erection of the hospital Maison des Parents at Revigny.

The Needs of the Refugees.

The immediate problem of ho those who have been able to return t destroyed villages having been met a as building is concerned, at least i villages to which the Society has access, attention has now been turn the needs of the refugees from dis further north, who now find what s


THESE DWELLINGS FOR SINISTRES WERE BUILDED AD 1916-17 BY THE FRIENDS WAR VICTIMS RELIEF EXPEDITION ON A SI
PURCHASED BY THE COMMUNE, THE MATERIALS BEING SUPPLIED BY THE DEPARTEMENT.
CITÉ OUVRIÈRE A PARGNY SUR SAULX


Projet pour Cité Ouvrière à Pargny-sur-Saulx Marne
Puits Pompe
Puits Pompe
Sermaize
Pargny
Probable
Future
Extension
Echelle 0.002
Mètres
Mission Anglaise de la Société des Amis

LAY-OUT OF WORKING-CLASS COTTAGES IN THE RECONSTRUCTED VILLAGE OF PARGNY-SUR-SAULX, MARNE.

can in towns in all parts of France, particularly in those nearer to the

Perhaps the worst conditions are oyes, in normal times a town of about inhabitants, with a total increase of persons at the present time, including oldiers and their families, and 6,000 ees. Chalons-sur-Marne, Bar-le-Duc, and many other towns are also badly overcrowded, accommodation arce, insanitary, and in many cases st impossible to obtain, and rents are Future building work will aim at ing these conditions as far as pos- at the same time providing a stock ts which will be available for use in invaded districts when this becomes ole.

Movable Huts.

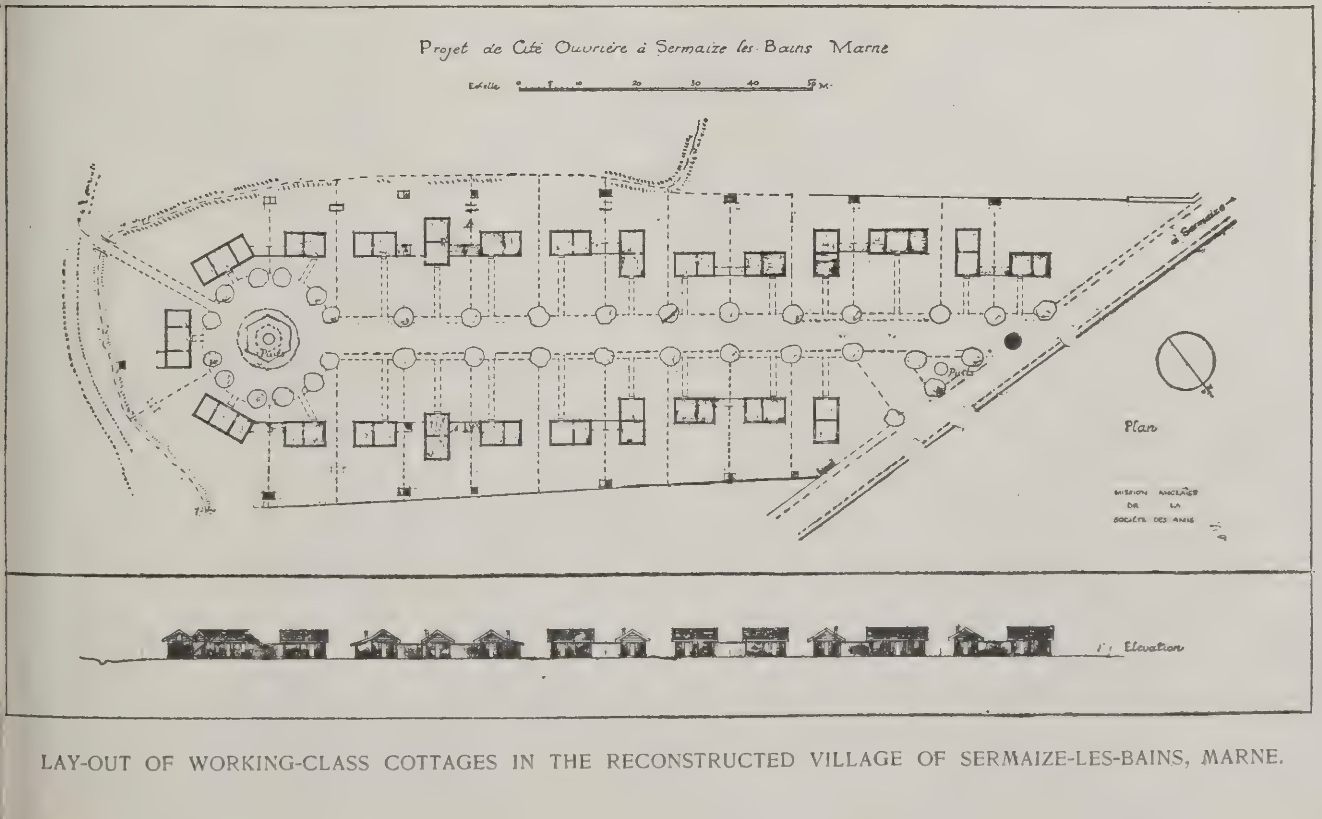
arrangement with the French stry of the Interior, the Society is engaged upon the construction of 100 s (maisons démontables, or movable eventually intended for the Department of the Ardennes, which it is hoped e whilst awaiting the time when the rtment shall be freed for housing refugees from that Department now living in bad conditions in other parts of France. The first scheme, for the erection of thirty of these huts for refugees at Troyes, has been accepted by the Prefecture of the Ardennes, and the Society hope also to work similarly for the Marne, Meuse, and other departments. When circumstances permit the refugees to return to the north, these huts can be taken to pieces, transported and erected again in their own villages.

Dôle Building Camp.

For the construction of these huts a large workshop has been opened at Dôle in the Jura, where an unfinished school building has been placed at the disposal of the Society for that purpose. The town is located near the greatest timber-growing district of France, the Jura mountains, and is well situated, with facilities for rail and water transport both for receiving material and for sending away the frames of the finished huts. Another construction camp is being established at Ornans, near Besançon. The Society hopes to be able to turn out huts rapidly when the reinstallation is complete, and to keep employed several groups of men to erect them in various towns overcrowded by refugees, of whom there are over a million in different parts of France. The cost of materials for a two-room hut is about £40, and for a three-room hut £58.

Proposals for the use of maisons démontables for tubercular patients, and for other purposes, have also been made, and the huts should prove very useful in helping to give the refugees more sanitary and cheaper shelter, and at the same time provide a stock of houses which will enable them to return to their villages as soon as that becomes possible. The work is being very considerably extended at the present time, owing to the addition of about 100 workers who have come over from America in order to give their assistance. It is now the joint work of English and American Friends.

The accompanying illustrations show various types of buildings that have been erected. Readers who desire to support the excellent work of the Society of


Projet de Cité Ouvrière à Sermaize les Bains Marne
Echelle
10
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50 M.
Puits
Puits
Plan
Mission Anglaise de la Société des Amis
Elevation

LAY-OUT OF WORKING-CLASS COTTAGES IN THE RECONSTRUCTED VILLAGE OF SERMAIZE-LES-BAINS, MARNE.

Friends should send subscriptions to Miss A. Ruth Fry, 91, Bishopsgate, London, E.C.2, and gifts of clothing to Miss Ethel M. Ashby, 22, New Street Square, London, E.C.4.

VILLERS-AUX-VENTS, MEUSE.

SURVEYORS' INSTITUTION REPORT ON HOUSING.

A valuable report of the Housing Committee of the Surveyors' Institution has been published at the Institution, 12, Great George Street, Westminster, S.W. It is explained that, as a sequel to their recent report on housing emergency schemes for the purpose of providing employment after the war, the committee were desired by council minute of December 11, 1916, to extend their inquiry to the causes which had given rise to shortage of housing accommodation for the working classes. For this purpose Sir Robert Thompson and Mr. Edwin Savill were added to the committee. Owing to ill-health the former was reluctantly compelled to retire from the committee early in their proceedings, but the Council were fortunately able to obtain the services of Mr. J. George Head in his place.

The terms of the reference were: "To consider and report to the Council as to the factors which in England and Wales have been mainly instrumental in checking the erection of houses for the working classes"; and the form of words selected by the Council seemed to the committee to relieve them from the necessity of dealing exhaustively with the question whether a shortage did as a fact exist.

A summary of recommendations appended to the report is as follows. All its points are, of course, elaborated in the report, which, due allowance being made for its special point of view, is a valuable contribution to the subject:

1. The National Exchequer should contribute a larger proportion of the present expenditure on National Services, such as education, poor relief, police, etc.

2. The greater proportion of further increases in the cost of National Services should be borne out of national and not out of local funds.

3. Some appeal against obsolete or unduly restrictive building by-laws should be provided.

4. An amendment of the Housing, Town Planning, etc., Act, 1909, is required to prevent unduly prolonged check on building between the introduction and approval of a town-planning scheme.

5. If increment value duty and reversion duty are to continue, they should not apply to houses coming within the provisions of Section 14 of the Housing, Town Planning, etc., Act, 1909.

6. If increment value duty is to continue it should be payable only in respect of realised increases in the actual value of bare land.

7. Undeveloped land duty should repealed.

8. The activities of building societ should be encouraged.

9. The facilities provided by Section of the Housing Act, 1890, as amended the 1909 Act, for enabling approved co- panies, societies, and individuals to obt capital for the erection of cottages, shol be extended.

10. Special provision might be made the purpose of assisting persons desirous purchasing houses.

11. The precedent of the Housi (No. 2) Act, 1914, of a bonus given by t Treasury to meet the additional cost of i mediate building should be followed a extended to individuals as well as to lo authorities and authorised societies.

12. The price of finished materi might be kept down by the wider adopti of standardisation.

Rural Districts.

13. That owners of cottages should ta such opportunities as may offer of fixi rents at the lettable value.

14. That where, after inquiry by t Board of Agriculture, a shortage of hous for the natural requirements of a parish district is found to exist, the provisions the Housing (No. 2) Act, 1914, should put into force; and if the landowners not themselves erect the necessary hous the sites should be obtainable at t market price of the land, if necessa under compulsory powers.

15. That where the shortage is found the Board of Agriculture to be due to t housing provision for the ordinary requi ments of the district being taken up

CONSTRUCTING A HUT IN THE DEVASTATED AREA.

oyees of the Government, local autho-
, or statutory companies, those bodies
ld be required to supply sufficient ac-
nodation for their own needs in the
t of the landowners not exercising
option to do so.

That where cottages are built under
ibove Act, garden ground of not less
one-tenth of an acre should be sup-
.

That where the owner himself
ies to build after a shortage of houses
een found to exist by the Board of
ulture, he should be placed upon an
lity with local authorities or authorised
ties building under the above Act with
d to the financing of his operations,
ding that he fulfils such conditions as
ns, water supply, garden ground, and
, as the Board of Agriculture may lay
.

That, if necessary, facility should be
to owners to form themselves into
rised societies for the purpose of ob-
ig the financial assistance for building
ed to in the previous paragraph.

That the Board of Agriculture
d be empowered, in all cases dealt
by them under 4, to modify or amend
ing by-laws which in their opinion
l unnecessarily add to the cost of the
ing.

NEWS ITEMS.

ondon's New County Hall Commandeered.

is stated that the new County Hall,
minster, which is still incomplete,
een taken over by the Army Council,
vill be fitted up as temporary offices.

nstitution of Mechanical Engineers.

general meeting of the Institution of
anical Engineers was held at Great
ge Street, Westminster, on Friday,
er 19, at six p.m., when a paper was
by Mr. Oswald Wans entitled, "A
arison of the Working Costs of the
ipal Prime Movers."

An Employer's Duty.

gulations require employers of labour
ke a return of all male employees
sixteen years of age (on Form D.R.17
able at any post office) to the
ting officer of the district in which
en work. A duplicate form should
pt by the employer on the premises,
oth should be revised monthly if the
on arises. Failure to comply with
regulation entails heavy penalties
Defence of Realm Regulations, 41a.

The National Labour Supply.

e Building Trades Central Advisory
mittee, which advises and assists the
try of Labour on matters affecting
eople in that industry which arise
administration of Employment Ex-
es, has held a meeting at which the
ing, among other subjects, were con-
d: The Central London building
, the exchanges and relations
en the National Service Department
he Employment Department, and
nery which it is now proposed to
to secure the most economical use
national labour supply.

Business Change.

understand that the old-established
ss of Messrs. E. H. Shorland and
er, Failsworth, Manchester, has been
ed of by private treaty. In future
quiries, orders, and correspondence
relating to their Ventilating Department (including the supply of Shorlands' exhaust ventilators and fresh-air inlets, etc.) should be addressed to Messrs. Henry Hargreaves and Sons, ventilating engineers, Bury, Lancashire. All inquiries, orders, and correspondence relating to the patent "Manchester" stoves and grates and the Heating Department generally, should be addressed to Messrs. George Wright, Ltd., of Burton Weir Works, Rotherham, 155, Queen Victoria Street, London, E.C., and 83, Bridge Street, Manchester.

Memorial in St. Paul's to Sir George Martin.

A memorial tablet to Sir George Martin, late organist of St. Paul's Cathedral, will be unveiled in the crypt of the cathedral by Sir Alexander Mackenzie on Wednesday, October 31, at three p.m. The fund, which now amounts to £1,361 2s. 8d., will be closed on October 31. After paying for the tablet, which is the work of Mr. Henry Pegram, A.R.A., the balance will be invested in the purchase of an annuity in Lady Martin's name, but at her death an equivalent sum will be invested to provide a Sir George Martin scholarship or scholarships for boys leaving the choir school.

Australian War Memorial.

A memorial to the men of the First Training Battalion, Australian Imperial Forces, which has been erected at Durrington, near Amesbury, Salisbury, and has just been unveiled takes the form of a massive obelisk and bases in the rugged red Scotch granite, standing altogether 15 ft. high, with the arms of the Australian Commonwealth in bronze. The following inscription is boldly carved: "To the glory of God and in memory of the men of the First Training Battalion, Australian Imperial Forces, who died on active service at Lark Hill. Erected by their comrades, 1917. 'Greater love hath no man than this, that a man lay down his life for his friends.'"

NATIONAL HOUSING SCHEME: GOVERNMENT INTENTIONS.

The Government has decided that the new national housing scheme shall be controlled and directed by the Local Government Board. The returns and reports already received from the city, borough, town, and district councils throughout the country show that about 100,000 new workmen's dwellings are urgently required, but it can be stated that from 150,000 to 200,000 will be erected to meet the after-war conditions. It was intimated at the Local Government Board last week that the Government will be asked to make a grant of a subsidy of several million pounds for the erection of the houses, but this subsidy will be purely a temporary measure to meet the abnormal conditions that will prevail after the war. The type and size of the houses will vary according to the district in which they are built, but all the parts will be standardised, from the bricks to window fittings. In every possible case gardens will be provided for the purpose of food cultivation, and the Local Government Board will encourage the local authorities to purchase land for this purpose, it being realised that the working-man's garden will be of national value in the years of world-shortage of food following the war.

HOUSING MOVEMENTS.

Barrow's Concrete Houses.

Some of the 500 semi-permanent houses to be built by the Government at Barrow will be of concrete and have four or five rooms. Some will be ready by Christmas, and all are to be finished by March. The 500 permanent houses will also have four or five rooms, and the plans are described as "æsthetic as well as sanitary." In the meantime munition workers will be billeted by voluntary and, if necessary, compulsory methods by the Central Billeting Board.

Housing Scheme as War Memorial.

The suggestion that Liverpool's principal war memorial should take the shape of a big rehousing scheme is being very sympathetically received in responsible quarters as well as by the public generally. It is being felt that the sacrifices of the war are worthy of commemoration not merely by means of an architectural embellishment or two, but by a large scheme of social reform which will make the city life of the future healthier and happier and more dignified than it is to-day. The total elimination of slums and the substitution for them of central garden colonies will be some compensation for the cost and wastage of the war.

Housing and Discontent.

The report of the Royal Commission on the Housing of the Industrial Population of Scotland, which has been issued as a Blue Book, says the insistent demand for better accommodation can no longer be safely disregarded, and is justified by the appalling state of congestion among all the labouring classes, rural and urban. At least 50 per cent. of one-room houses and 15 per cent. of two-room houses ought to be replaced by new erections, and if overcrowding were taken to mean more than three persons per room it would be necessary to displace more than 284,000 of the population. The Commissioners are satisfied that the State alone can meet the present discontent.

Braintree.

The Braintree Rural District Council have adopted the recommendations of the Housing Committee for the building of 115 cottages in the parishes around Braintree under the Housing of the Working Classes Act, providing financial assistance is forthcoming at the close of the war. The scheme provides for fifty-four cottages at Bocking, where dwellings are urgently needed for workers of the mechanic class; twelve at Hatfield Peverel, eight at Panfield, eight at Shalford, seven at White Notley, six at Great Coggeshall, and four in each of the following parishes: Bradwell, Cressing, Little Coggeshall, Pattiswick, and Great Ealing.

Lectures on Housing.

It is announced that Professor S. D. Adshead, M.A., F.R.I.B.A., is to deliver at University College, Gower Street, six public lectures on "Housing Problems after the War" (illustrated with lantern slides), on Tuesdays at five p.m., beginning November 6, 1917. At the first lecture the chair will be taken by the Right Hon. Christopher Addison, M.P., Minister of Reconstruction. Admission is free. Application for tickets, accompanied by a stamped and addressed envelope, should be made to the secretary, Walter W. Seton, M.A., D.Lit.

PUBLISHER'S ANNOUNCEMENT.

THE question of the cost of Advertising is governed entirely by the circulation of a publication. The prices for small Advertisements enumerated below are framed upon the lowest possible basis in order to allow the use of the columns of the Journal for "Wants," &c., at a figure well within the reach of everyone.

Advertisers are purchasing the circulation of a paper in buying space for their announcements, and we are able to announce that "The Weekly Nett Sale of The Architects' and Builders' Journal is larger than that of any other Architectural Journal."

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THE Association of Builders' Foremen and Clerks of Works, 56, Old Bailey, E.C.—Experienced Foremen and Clerks of Works can be obtained by applying to the Secretary, Mr. J. W. Sawyer, 214, Clapham Road, S.W. Competent foremen and clerks of works are invited to join this Association.

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JUNIOR Architect and Surveyor's Assistant required, who can measure and plot plans of buildings, etc., accurately.—Write, stating salary required and qualifications fully, S. A., Box 5201, Willings, 125, Strand, W.C.2. 49

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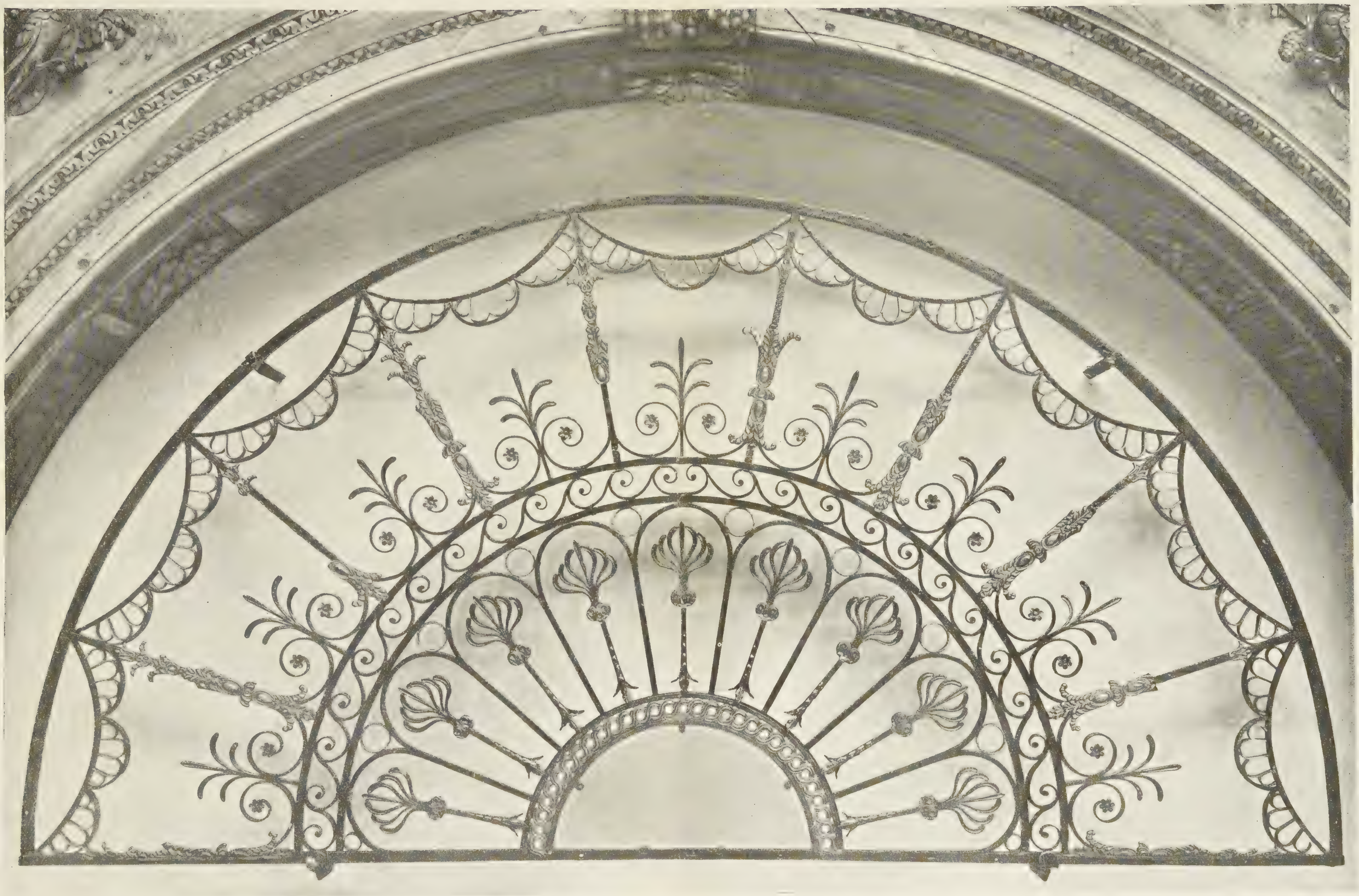

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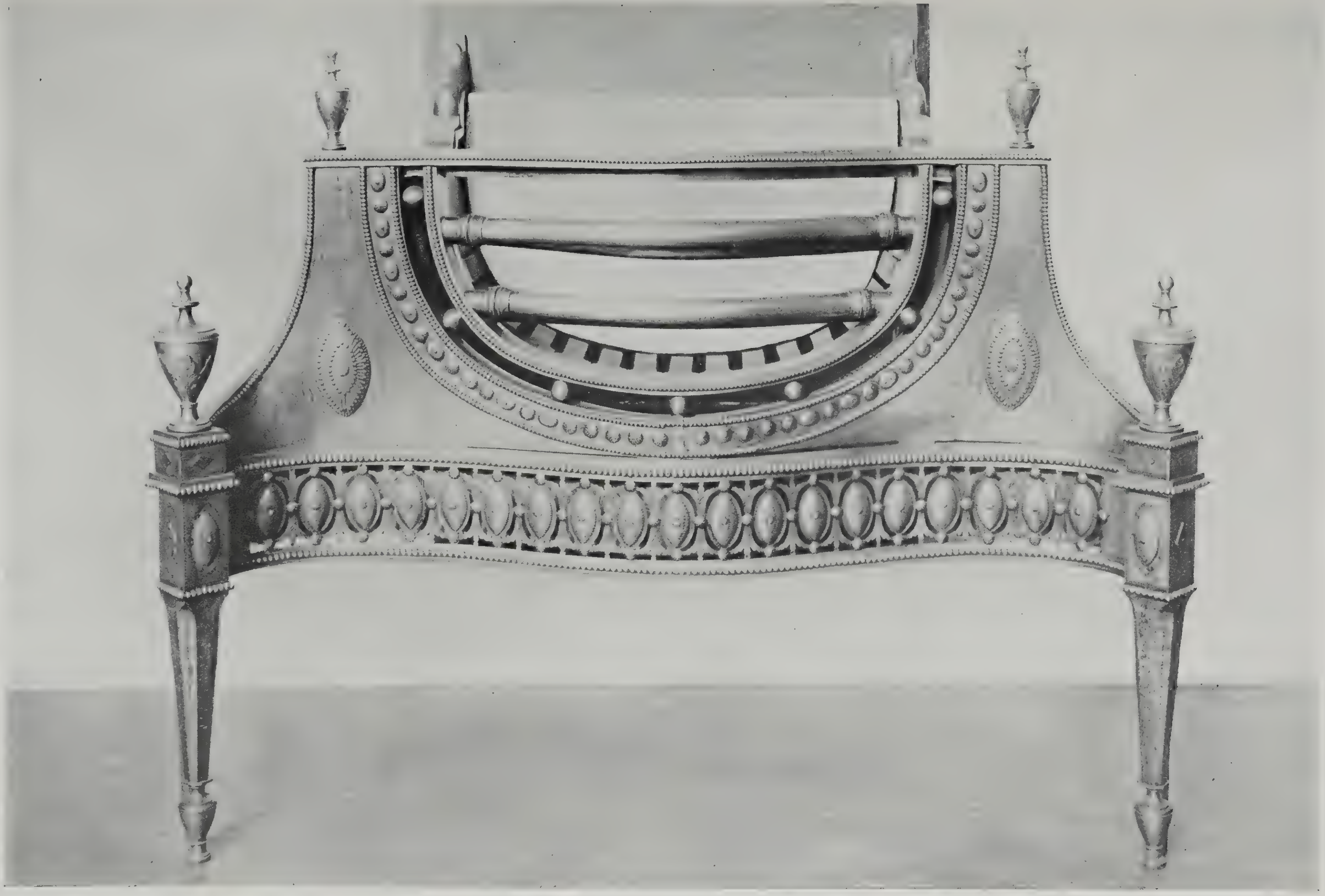

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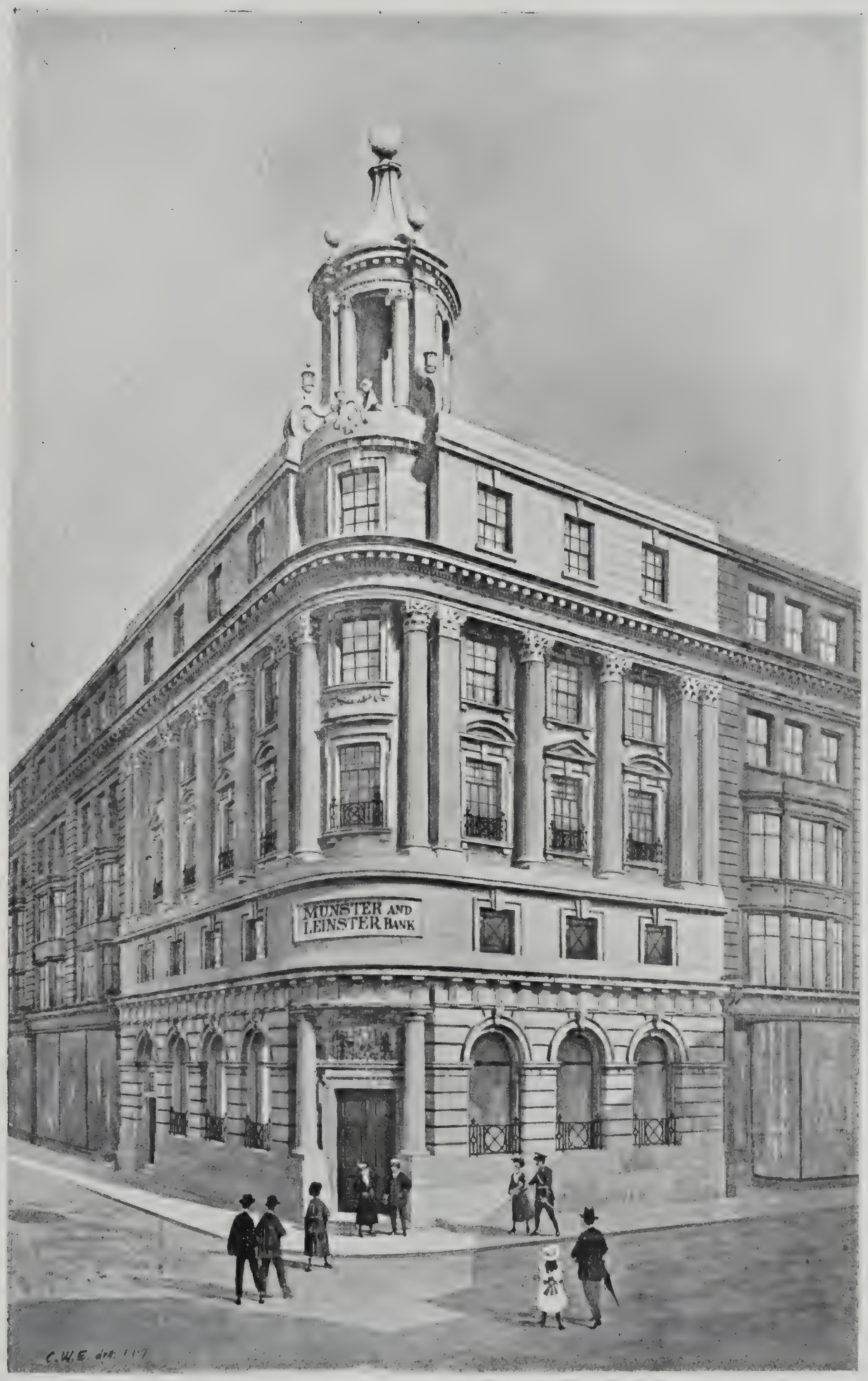

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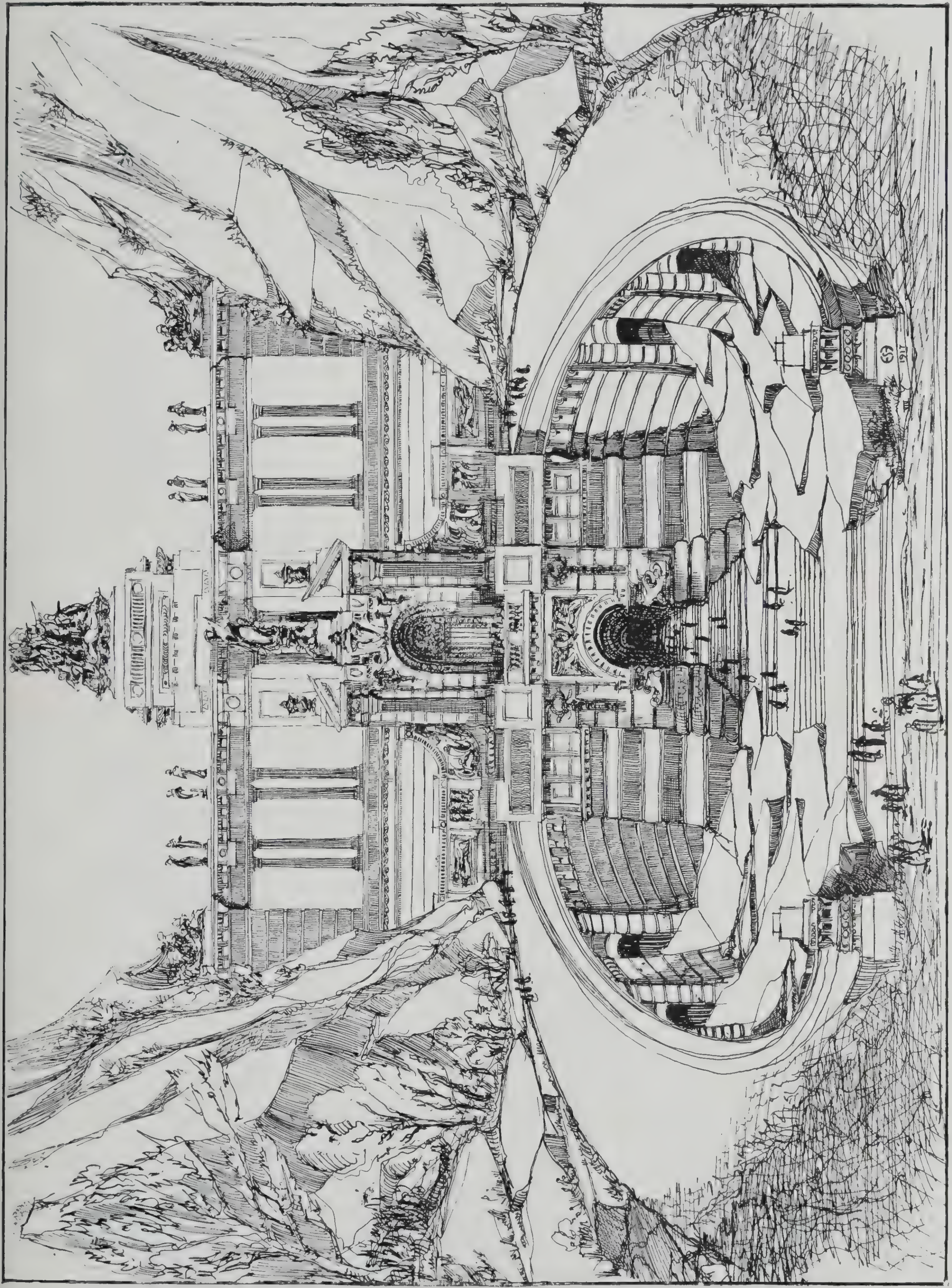
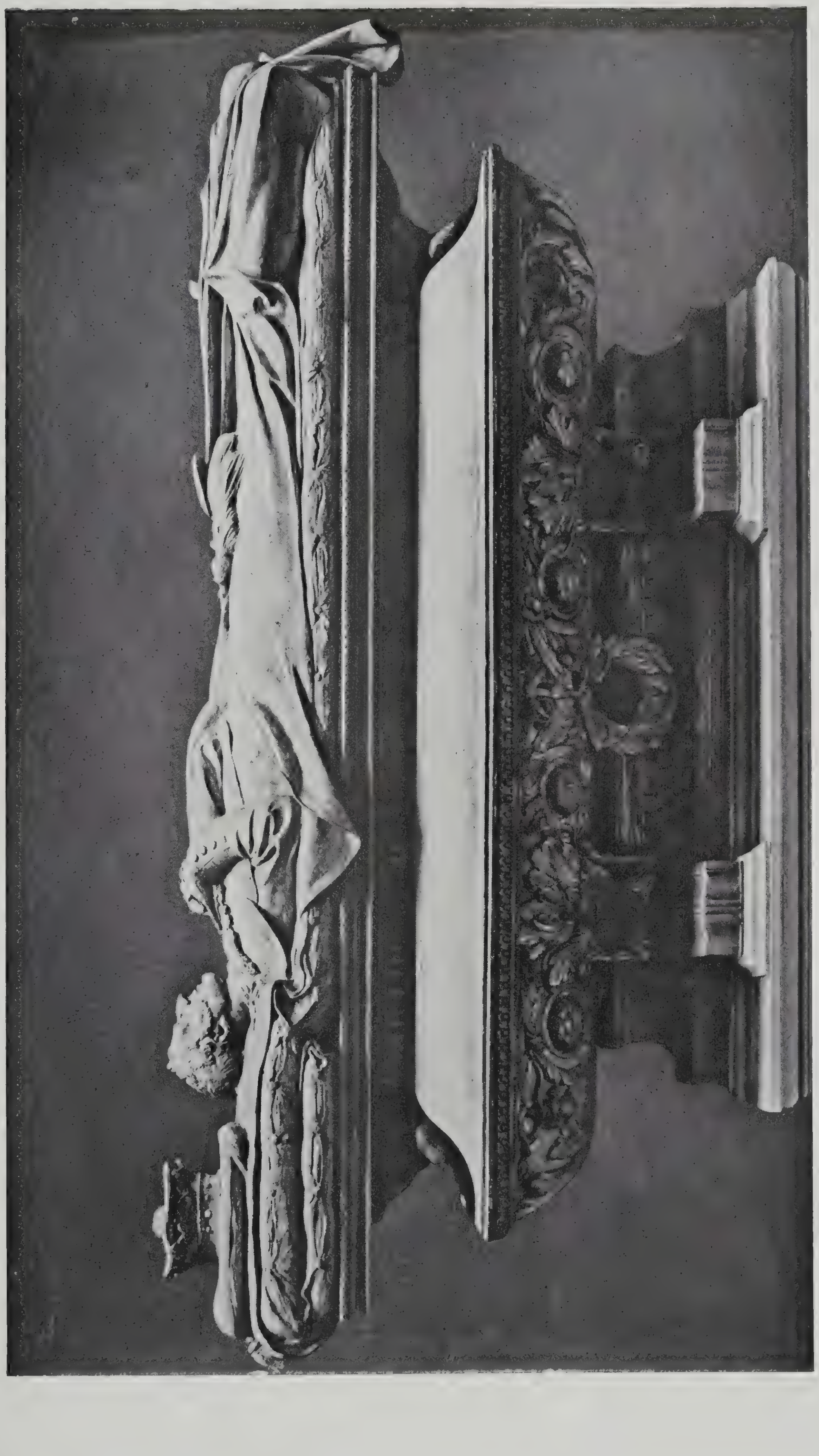


ARCHITECTURAL IDEAS.—IX. BY AN ARCHITECT ON WAR SERVICE.



MONUMENTS. XXX.—SARCOPHAGUS ON THE WELLINGTON MONUMENT, ST. PAUL'S CATHEDRAL, LONDON.

ALFRED STEVENS, SCULPTOR.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

OCTOBER 31, 1917. TOTHILL STREET, WESTMINSTER. VOLUME 46. No. 1191.

NATIONAL PAPER ECONOMY.

ing to the very necessary Government restric- on paper supplies, all elements of waste must gorously excluded. Our readers, we are sure, gladly assist in promoting this object, which is m in national economy. They can co-operate us effectually in either of two ways—(1) By g a direct subscription for this Journal, or (2) acing with a newsagent an order for its regular ery. Casual purchases—now here, now there— a serious discrepancy between supply and nd, and cause a wastage of effort and materials ould obviously be reduced to a minimum but he casual and erratic purchasing which we stly ask our readers to avoid.

RIOUS complaints that the Government is by no means practising what it preaches in the matter of economy are becoming very frequent, and are supported by specific instances, many of which to paper or stationery. One gentleman writes to ress to say that he has received, at various times, different Government Departments, enough nents to paper a large room; and a prominent ing contractor has shown us six copies of a docu- that need not have been duplicated. These seem e been supplied on some sort of barrage principle are, of course, restrictive in their message), in a great deal of shrapnel is fired off on the chance ome of it may hit the mark. In normal times this lity would be highly esteemed. An employer business comprises many departments might be o distribute the documents among his managers; the present time of dearth and stringency he willingly forgo this convenience and make a impression suffice. Moreover, the extravagance instance is deadly thorough, the much-multiplied nent being printed in large type, very widely d, on foolscap paper, with ample margins and a gious blank extending to half a page. As there ur pages of it, where two would have sufficed, it s that the avoidable wastage of paper is 4 × 6 = 2 = 22 pages of good foolscap. Multiply this by he unknown number of firms to whom it was ssed, and by the number of other more or less r documents which succeed each other with dering prodigality, and then consider the fine e to which machinery and labour, paper and ink, eing employed in exemplification of national my. Public admonitions to "Eat Less Bread" probably be found, if the facts were ascertain- to countervail the value of the saving they . And the huge posters mainly advocating thrift onomy negative the idea by their obvious extra- ice in the matter of space and paper. It need be said that these observations are offered in no g spirit. It is because we are anxious to assist overnment in their quest of economy that we re to point out one direction in which they seem themselves straying from the appointed path, which we should all proceed the more blithely for discouraging example.

*   *   *   *

J. B. Gass, in his interesting presidential address Manchester Society of Architects, marshalled ably the arguments for registration. By this time they are all very familiar, but their occasional restatement is therefore the more necessary, lest the fire die down into smouldering ineffectiveness. There can be no question, we think, that the subject derives fresh vitality from the force of circumstances. Organisation, or reorganisation, is to become a general process, our insular mistrust of it having sunk to insignificance in face of the marvels it has wrought in creating such vast armies of fighters and workers, and in other ways coping successfully with unprecedented conditions. Consequently, the more immediate danger seems to be, not that we shall continue to disdain it,but that we shall perhaps become too deeply enamoured of it. To love it for its own sake, to become absorbed in the machinery rather than in the product, as some enthusiasts are sure to do, will tend to bring organisation into unmerited disrepute, and to set up reaction. Registration being now inevitable , care must be taken to turn it to the best account, not merely for the profession but for the art of architecture. There must be, for instance, no question of the competency of the architect admitted to the register. If registration is really to raise the status of the profession, proof of training must be a condition precedent; and registration should therefore have the immediate effect of reorganising architectural education on an extended scale and upon less casual lines. Moreover, it will be necessary to insist more strongly than ever on the maintenance of a high standard of general education; and on these points the profession of architecture should not be inferior to the standard insisted upon in law and medicine. No doubt the R.I.B.A. and the Society of Architects are making careful provision for standing and qualification; but trouble may arise when the Registration Bill—we trust that there will be but one—goes through the ordeal of committees, and very dexterous steering will be required to bring it out unspoilt. A sterile Bill would be worse than none at all, for it would defeat its nominal object and obstruct progress.

*   *   *   *

There should be no difficulty in recruiting men of the right type for a profession than which, as Mr. Gass observes, in his Presidential address to the Manchester Society of Architects, there is none "in which the interests are more varied or the opportunities for usefulness and happiness greater." True, the chances of acquiring wealth and fame are less abundant; but there is rich compensation in the enjoyment which the right type of architect can derive from the exercise of his profession, his art, his science. With every fresh design there arise problems that he rejoices to master, difficulties that he delights to overcome; and to the exultation of the artist there is added the satisfaction that he has produced something that is useful as well as beautiful —something substantial, tangible, abiding—something that will be admired and serviceable long after he is forgotten. He can do that which increases the enjoyment and helps to conserve the health of the community. It is a proud privilege for one who loves his fellow-men. No painter, no sculptor, can claim this completeness of service to art and utility; and neither of them has so much need to study social needs and conditions and idiosyncrasies. *Nihil humanum me alienum puto* must be his motto. As he has to house humanity he needs must understand it in all its phases. Architecture is so fascinating a pursuit because of its human interests, and these, by their diversity, should make the architect the most versatile and adaptable of men. For not even the engineer, whose boast it is that he is equal to every occasion, and can go anywhere and do everything, has equal opportunities for all-round observation and for the cultivation of a many-sided character, for seeing human nature steadily and seeing it whole.

* * * *

It was inevitable that the advocacy of better factory buildings should be opposed by reactionary objectors. One of them says, in effect, "What do factory-workers care for architectural appearance? Not a jot! All this fine talk about its influence on their minds and lives is sheer rubbish, and the same verdict applies to the sentimental nonsense about the appearance of schools." This, of course, is nothing more than absolute dogmatism, unsupported by any attempt at argument. It is not worth notice except as a sample of the kind of opposition that invariably obstructs reform, and will have to be met and overcome with respect to factories and schools. To overcome it by reasoning is as hopeless as explaining colour-effects to the born-blind or music to the deaf-mute. Any appeal to the known effects of environment would be scouted as weak credulity, and would merely confirm the objectors in their obstinacy. Their conversion can only be effected, as a rule, by the failure of their obsolete methods in the unequal competition against more progressive policy. And even when they have to admit defeat, they are prone to attribute it to any and every cause but their own purblind obstinacy. In the endeavour to persuade such clients to build aright, the architect is fortunately able to point to the example of American manufacturers, who have firm faith in architectural appearance and scientific lay-out as "business propositions." What has been done in this direction by British as well as American manufacturers is copiously exemplified in the timely book on "The Design and Construction of Modern Industrial Buildings" recently published by Technical Journals, Ltd., and the large collection of examples there shown should convince most completely those few waverers who are disposed to hearken to reactionary counsels.

* * * *

In the House of Commons last Wednesday, Sir Alfred Mond, First Commissioner of Works, in answering questions by Mr. King, the member for North Somerset, stated that he was in possession of a photograph of the St. Gaudens statue of President Lincoln, and was endeavouring to get a photograph of the statue by Barnard. When he had both photographs he would be "very glad to place them in the tea-room of the House of Commons." But what would be the grounds of his gladness? Mr. King had suggested that an opportunity should be given to the House of Commons, and to recognised authorities on civic art, to make suggestions before any statue offered by any private persons was accepted for erection in London. Sir Alfred Mond replied that he did not consider that this suggestion was at all practical. In the name of common sense, why not? Quite obviously this is the only practical and businesslike course to take. It is consulting the persons who know, and is every whit as practical as consulting a doctor or a lawyer on their respective subjects of special knowledge. It cannot be supposed that, since the remote days of Mr. Acton Smee Ayrton, any First Commissioner would, with self-sufficient complacency, dispense with competent advice on such matters. Doubtless Sir A. Mond has consulted expert opinion in this matter of the statues. If he has not, the neglect of so elementary a precaution is inexcusable; if he has, then there is no sufficient reason for refusing to extend the principle; and if the exhibition of those photographs in the tea-room is not intended to elicit advice, but merely to gratify curiosity, it will be idle, and a temptation to idleness. We plead for a larger view of the arts than this paltry incident suggests.

* * * *

Some brief observations last week on town-halls prompt the further reflection that, as a rule, provincial cities are much better off in this respect than are most of the London suburbs, where many of the alleged town-halls are the insignificant survivals of the old vestry-halls, which are often mere offices for the rate-collectors and their clerks, and inadequate at that. These officials are rather lucky when they are not afraid to open the windows of their stuffy rooms because of the reek of the scavenging and refuse carts and stables in the adjoining outhouses. London suburbs are—many of them—badly in need of adequate town-halls, comprising not only offices and rooms for the transaction of business, but assembly-rooms where public meetings could be held; but at present the metropolitan borough councils are too strongly obsessed by the old parochial spirit to build consonantly with their comparatively new dignity. New mayor is but vestry chairman at large.

* * * *

A slight tendency towards the general subterranean inclinations of the moment was manifest at a recent meeting of Birmingham City Council. An arterial road scheme which was outlined made further provision for tramways, but it was objected that the possible adoption of tube railways would make tramway extensions unnecessary. Tube railways, indeed, have lately assumed an importance that might never have accrued to them but for their convenience as bomb-proof shelters. This ancillary function was not mentioned at Birmingham, but recognition of it may very well have been present in the minds of the burgesses, and it may possibly be a deciding factor in many other directions. It has long been a favourite notion of ours that railways passing through cities should do it subterraneously—that the underground and tube railways of London, Paris, New York, and elsewhere, point to the obsolescence of the earlier and more primitive system of above-surface lines. Hence ugly railway bridges such as those with which London is afflicted are an anachronism, not merely because they are an eyesore and a nuisance, but because they offer landmarks and bomb-marks to the enemy, whereas the concealed railway is not only free from these disadvantages, but affords effectual shelter from raids—a matter that may be considered comparatively insignificant just now, but is bound to assume immense importance in relation to future developments of aerial warfare. Underground cities, too—at least cities of refuge—may be among the commonplaces of the not very distant future, and then we shall get emergency entrances as well as the more familiar emergency exits.

* * * *

In the House of Lords last Friday, the final appeal in the pre-war contract case of the Metropolitan Water Board v. Messrs. Dick Kerr and Co., Ltd., was heard before the Lord Chancellor and Lords Dunedin, Atkinson, and Parmoor. It will be fresh in the memory of our readers that the main point in dispute was whether or not a contract for the construction of a reservoir at Littleton had been determined by its suspension at the order of the Ministry of Munitions. In the court of first instance, Mr. Justice Bray granted a declaration that the contract had not been abrogated, and that the contractors' plant became the property of the Board. This judgment having been reversed on appeal, the case was carried to the House of Lords, where their lordships, without calling on counsel for the respondents, intimated that they would reserve judgment.

HERE AND THERE.

MORE or less casual intimation that the cus-
tomary evening hate was on had kept us indoors,
because the shrapnel-proof overall and bomb-
sting umbrella are not yet produced commercially.
after an hour or two of expectancy, we heard no
s and saw no searchlights, I went out to scan the
s. I was just turning back to report that the night
serenely peaceful, when through the darkness
e rushed the messenger of death—whizz, bang,
h. That was all; but it was enough. It was a
, not from the blue, but from the blackness—of the
s and of the heart of the enemy of humanity. Soon
rwards I heard that, simultaneously with the crash,
e poor little houses less than half a mile away had
utterly demolished, killing fifteen persons,
tly children. It is probable that the dastardly
derers found a swift and fiery retribution in
nce; but one is daunted by the thought that while
e poor dupes and tools have perished—and I can-
pretend to feel any marked excess of pity for them
eir malignant instigators will perhaps escape, on
side of the Styx, the just reward of their devilish
ls. It is a depressing thought, and I will not dwell

* * * *

ot even Mr. Norman Angell, I suppose, believes
e confidently that this is "the war that will end all
s." When it is over, and while its horrors are still
in the memory, there will be, no doubt, a general
ust for it. Afterwards there will come a genera-
to whom war is not a reality, but only something
ad about with delicious tremors, perchance to gloat
Experience, to be valued, must be purely per-
l, and dearly bought. "You cannot put old heads
oung shoulders"; and as the son of a thrifty man
ten a squanderer, it may be only too confidently
cipated that the heirs of peace will make haste to
pate their unearned heritage. And so this mad
world goes round in its eccentric orbit. Until
millennium it will never be quit of its hot-
led and cold-hearted Junkers or their equivalent
inal lunatics, nor of the wretched persons they so
rfully sacrifice, and whom they reward with the
e of "cannon-fodder." And as all former wars
comparatively primitive in their engines of
uction so it may be inferred that the limit of their
tfulness has been by no means reached.

* * * *

is easier to imagine that in the next great war the
inery of offensive operations in the air will have
brought to diabolical perfection than that ade-
e protection against them can be devised above
nd. For a time—until concentration on the
istry of high explosives has achieved its worst—
monolithic houses with deep basements may
our turn. Afterwards it may be found necessary
onstruct subterranean towns on tube-railway
iples. Ultimately we may achieve the conditions
ibed in that much-neglected and almost forgotten
de force of Lord Lytton's—"The Coming Race."
on, it will be remembered, makes much of the
oded idea that war can be made so terrible that no
dare resort to it. The age of envy and hate, of
passions, of constant social changes more or less
nt, had been "finally brought to a close, at least
g the nobler and more intellectual populations, by
radual discovery of the latent powers stored in the
rmeating fluid which they denominate Vril." It
destroy or heal, and could enable you to learn
ages while you slept. Also it could be made to
rocks; and as a lighting medium it could give
s to the half watt or the whole watt, or any sort of
whatever. "The fire lodged in the hollow of a rod directed by the hand of a child could shatter the strongest fortress, or cleave its burning way from the van to the rear of an embattled host. If army met army, and both had command of this agency, it could be but to the annihilation of each. The age of war was therefore gone." Flame-ejectors and poison-gas entirely superseded. But would not something depend on which army "got its blow in fust"?

* * * *

As there was no violence, there were no armies; as there was no crime, there were no police; as there was no disease, there were no hospitals. Yet there were architectural opportunities of a sort. "We entered an immense hall, lighted by the same kind of lustre as in the scene without, but diffusing a fragrant odour." Sweetness and light. "The floor was in large tesselated blocks of precious metals." There were no doors; and "presently the roof of the hall opened, and a platform descended, seemingly constructed on the same principle as the lifts used in hotels and warehouses for mounting from one story to another." Apparently the style of the building was a free treatment of early Egyptian. "It was fronted by huge columns, tapering upward from massive plinths, and with capitals that, as I came nearer, I perceived to be more ornamental and more fantastically graceful than Egyptian architecture allows. As the Corinthian capital mimics the leaf of the acanthus, so the capitals of these columns imitated the foliage of the vegetation neighbouring them, some aloe-like, some fern-like." More inspiration for "Architectural Ideas in War-time."

* * * *

Town-planning principles were understood by the Coming Race. Every house had a large garden; and the broad main street expanded into a vast square, in which were placed the College of Sages and all the public offices; and in the midst thereof was a magnificent fountain of luminous fluid. "All these public edifices have a uniform character of massiveness and solidity. They reminded me of the architectural pictures of Martin. Along the upper stories of each ran a balcony, or rather a terraced garden, supported by columns, filled with flowering plants, and tenanted by many kinds of tame birds." I like our noble author's lordly contempt of syntax, and I will not affect to believe that it was not the gardens but the columns that were filled with plants and tenanted by birds. Every room had its mechanical contrivances for producing melodious sounds. Gramophones? This people were lords of the air. With an inflated bladder worn over the breast, and with a pair of borrowed wings, everybody could fly; and the vril fluid could be conducted through an almost indefinite distance, understated at five hundred miles, to reduce to ashes "within a space of time too short for me to venture to specify it, a capital twice as vast as London," the preliminary reconnaissance being conducted in an "air-boat," compared with which the balloons of Lytton's day were "ignorant and blundering experiments." It did not in the least resemble a balloon, "but rather our boats and pleasure-vessels, with large wings as paddles, and a central machine worked by vril."

* * * *

So Lytton's advance conception of the flying machine differs only in detail, and not essentially, from the realisation; and it may be that his rather sketchily imagined underground world is also destined to materialise. When the Channel Tunnel is accomplished, the burrowings need not end abruptly at Dover. They may be extended to ramify through the kingdom, creating a congeries of subterranean cities.

DIOGENES.

STIRLING MUNICIPAL BUILDINGS.

IN our issue for July 18 we reproduced a perspective drawing and a few other illustrations of the new Municipal Buildings at Stirling, recently completed from the designs of Mr. J. Gaff Gillespie, F.R.I.B.A. By the courtesy of the architect, we are now able to show some photographic views of the buildings (see illustrations on this and the opposite page, also supplementary plates in this issue), together with a working drawing of the principal entrance.

These buildings occupy a prominent site in Stirling, and are constructed of stone from Pasture Hill and Black Pasture Quarries. The main building contains the council chamber, reception-rooms, offices for Town Clerk, Town Chamberlain, collector of burgh rates, burgh surveyor, sanitary inspector, medical officer, health visitor, and assessor. The principal entrance floor, stair, and walls are of marble, and the decorative features are in keeping with the public nature of the corporation buildings.

The following notes are extracts from a memorandum on the decoration of the buildings prepared by Mr. David B. Morris:—

The eastern doorway has a porch, highly ornamented. The finial is a representation of Mary Queen of Scots, and in the space below is a design wrought in oak leaves and acorns, the badge of the Royal Stuarts. On each side of the doorway is a niche with canopy above, that on the left occupied by the figure of a warrior, and that on the right by the figure of a churchman. These three figures are symbolical of the long association of Stirling with the Crown, the military forces, and the Church. The Royal Palace was the favourite home of the Stuart Kings and Queens, the Castle was for long centuries and still is a place of arms, while the story of the Blackfriars and Greyfriars Monasteries, Cambuskenneth Abbey, the Chapel Royal, and the parish church, and more recent ecclesiastical affairs fill a large place in the history of Stirling. Above the door are the Royal Arms of Scotland, with the words "In Defence" and "Nemo Me Impune Lacessit." Below is the St. Andrew's Cross. Below the niches are unicorns.

In a band along the bottom of the window above are the words "Spair Notht. Considdir Weil. Speik Furth." These words are an adaptation of the lines carved on Mar's Work, the ancient mansion house of the Earls of Mar at the top of Broad Street. "Espy. Speik Furth. Spair Notht. Considdir Weil. I Care Notht." At the top of the two front mullions are carved in small letters "J.G.G." with a pair of compasses, and "W.G." with a mallet, the initials of the architect, Mr. J. Gaff Gillespie, and the builder, Mr. William Gourlay, respectively, and on the underside of keyblock of doorway is carved "A.W.Y.," the initials of Mr. A. W. Young, the carver of the figures and ornament. On the jamb of the doorway, on the left-hand side, is carved an open book, bearing the following inscription: "Foundation-stone laid by King George the Fifth, Municipal Buildings, 11th July, 1914."

Above the western doorway are carved the figures of two angels bearing the burgh seal, showing the obverse side with the bridge, crucifix, and warriors, while below are the words "Sterlini Opidum," which are quoted from the small burgh seal, which bears the wolf. At the sides of the doors are pillars with carved capitals, that on the left showing the heads of a king and of a warrior, and between them a figure holding a wreath in one hand and a sword in the other, representative of War. The capital on the right shows the heads of a queen and of a nun, and between them a figure holding a lily in one hand and a palm branch in the other, representative of Peace. The words "Municipal Offices" are carved above the door.

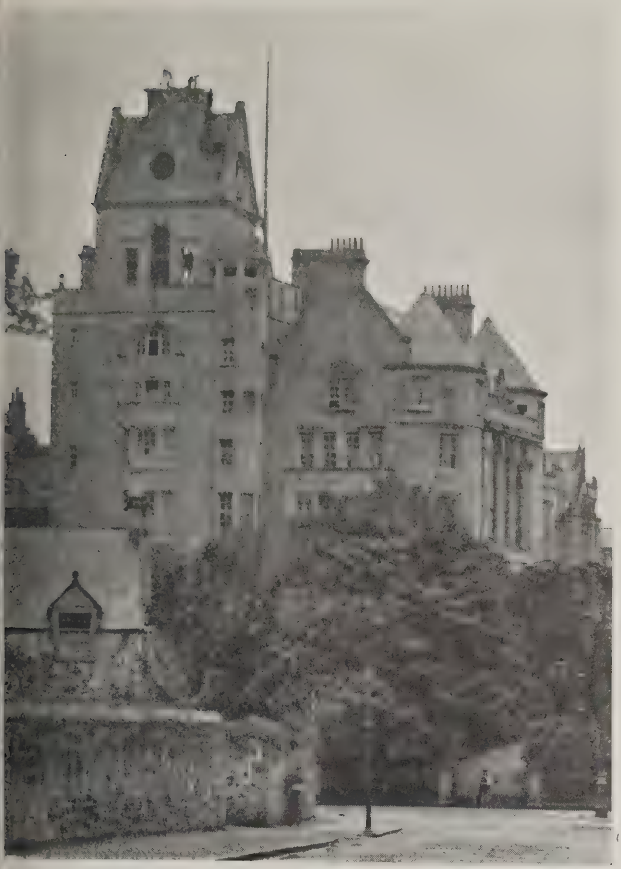
The finials of the three dormer windows of the roof to the front are carved with (1) a crown to represe Belgium, (2) the fleur-de-lis to represent France, a (3) a cross to represent Russia. These finials are a memento of the fact that the building was erected war time. They were completed before Italy a Rumania entered the struggle, but the remaining All of Britain may yet be represented when the scheme the building is completed. The western turret sho the name "John Cowane, 1633" (the date of his deat with the reversed figure 4, the emblem of the Stirli Merchant Guild. The eastern turret has carved o the name "Robert Spittal, 1530" (the date of t foundation of Spittal's Hospital), with scissors, t emblem of Robert Spittal, who was tailor to Ki James IV. These inscriptions indicate the fact t the Town Council are also patrons of Cowane's a Spittal's Hospitals, which are the two most import charitable Trusts in the town. The eastern turret a contains a representation of the head of Willi Wallace, the Scottish patriot, inclosed in a lau wreath with the date 1297, in which year he achie his crowning victory at the battle of Stirling Bridge.

At the south corner of the large tower is a lante surmounting which is a figure representing Mauri Abbot of Inchaffray, who, on the morning of the bat of Bannockburn, June 24, 1314, walked bare-foot alo the front of the Scottish lines, when they stood p- pared for the onset, raising a cross which he carri and exhorting his countrymen to perform their d nobly. The figure is placed looking south in t direction of the battlefield. Above the back door o the public health offices is an angelic figure graspin a serpent and crushing it, symbolical of the benefic work of the Public Health Department in combat disease.

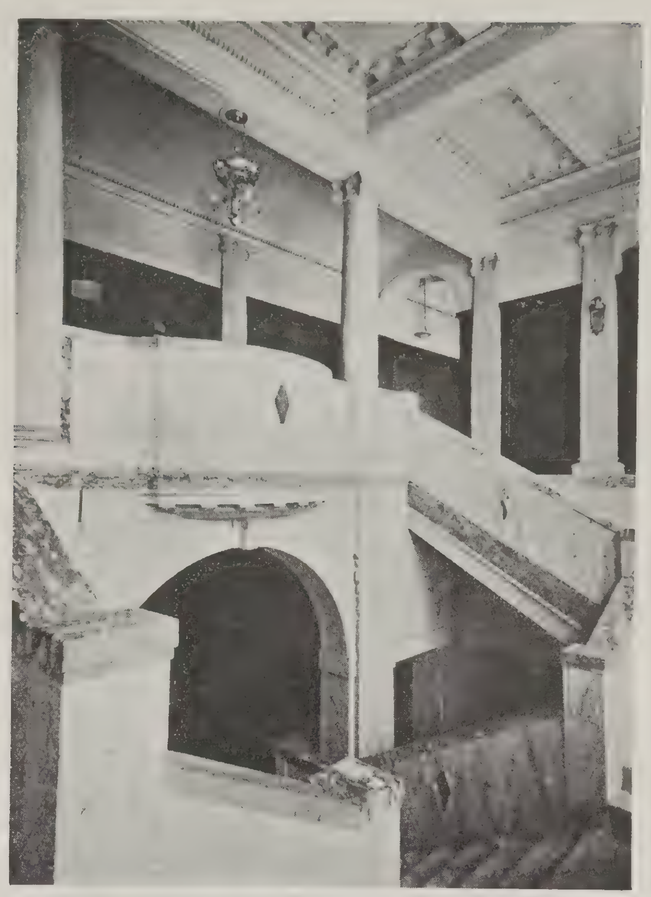
The main or eastern doorway is protected by a wrought-iron gate, with thistles and acorns in t pattern, which also includes the letters "S.M.B."

OIL-PAINTED PANEL OVER CHIMNEYPIECE IN RECEPTIO ROOM, SHOWING THE BAPTISM OF THE INFANT KIN JAMES VI., IN THE STIRLING CHURCH.

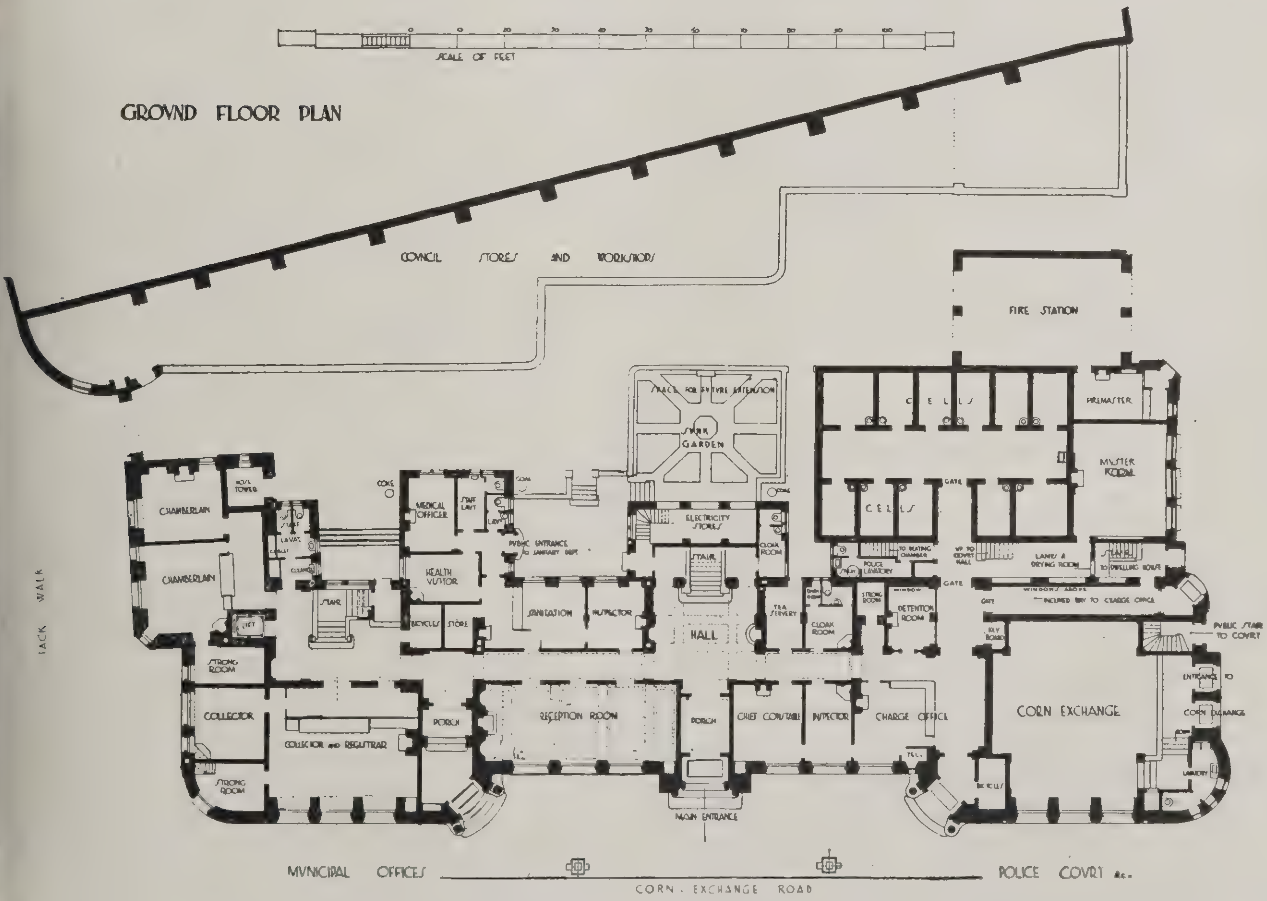
BY JAMES FERGUSON.



View from the South.



The Staircase.



MUNICIPAL BUILDINGS. STIRLING. J. GAFF GILLESPIE. F.R.I.B.A., ARCHITECT.

(For further illustrations, see Supplementary Plates.)

Stirling Municipal Buildings. On the front of the gate is a fine representation of the reverse of the burgh seal, the castle and trees.

The hall and staircase are inlaid with various kinds of marble. The capitals of the pilasters in the hall and staircase are decorated with emblematical figures, a boy in a kilt playing bagpipes, for the Highland regiments, and a youthful figure with a flag, for the Lowland regiments. The names of all the Scottish infantry regiments in the British Army are carved on these pilasters. They are as follows: Black Watch, Camerons, Seaforths, Argyll and Sutherlands, Gordons, Highland Light Infantry, Scots Guards, Royal Scots, Royal Scots Fusiliers, King's Own Scottish Borderers, Cameronians (Scottish Rifles). These constitute a slight memento of the gallant part taken by the Scottish regiments in the war waging while the building was being erected.

In the reception-room are two niches beside the fireplace. These contain the plaster casts of the figure of the warrior and churchman displayed at the eastern door. Above the fireplace is a painted panel. This shows the coronation of the young King James VI. on July 29, 1567. He was then thirteen months old, and the ceremony took place in the parish church of Stirling. The Earl of Mar held the crown over the infant's head, and John Knox preached the sermon. The painting is by Mr. James W. Ferguson. The capitals of the jambs contain, carved in wood, facsimiles of the heads on the pillars of the western doorway, namely, king, warrior, queen, and nun.

Following are the names of the sub-contractors: Messrs. the Non-slip Stone Co. (silex steps, non-slip footpath); Messrs. Chubb and Sons, Ltd. (strong-room doors); Mr. Charles Henshaw, Edinburgh (wrought-iron gates and railing); Messrs. Henry Hope and Sons (steel windows); Mr. J. L. McIndoe, Glasgow (ironmongery); Messrs. Edwards and Sons, Glasgow (electric clocks); The Bromsgrove Guild (electric fittings, door-handles); Messrs. F. and C. Ostler, Ltd. (electric fittings, council chamber). The Birmingham Guild (electric fittings, committee rooms); Mr. C. J. Thursfield (electric fittings in entrance hall); Messrs. Peyton and Peyton (electric fittings in offices); Messrs. Virtue, Stirling (special ironmongery and fireplaces); Mr. J. Caird Parker, Glasgow (office fireplaces); Messrs. Charles Smith and Son, Birmingham (door hinges and kicking-plates); Messrs. Waygood, Otis, Ltd. (push button elevator); Messrs. Estler Bros. (strong-room shelving); Messrs. A. Hamilton and Co., Possilpark, Glasgow (floor polishing).

The total cost of the buildings, without the police offices, is estimated at £25,000.

THE PLATES.

Stirling Municipal Buildings.

THESE new buildings, designed by Mr. J. Gaff Gillespie, F.R.I.B.A., are described in the article which begins on page 190.

The Chapel, Blenheim Palace.

The Chapel at Blenheim, though not particularly ecclesiastical in character, is an excellent piece of Renaissance design. Its most interesting feature is the fine monument to the Duke of Marlborough.

Bronze Doors, Royal Bank, Winnipeg.

Very effective use is made of architectural bronze and ironwork in the big modern buildings of Canada, many of which have been designed by American architects. A case in point is that of the Royal Bank, Winnipeg (Carrère, Hastings, and Bird, architects).

ARCHITECTS AND NATIONAL REORGANISATION.*

FREQUENTLY have I mentioned how archi ture is ever representative of the spirit of times, the life, habits, and mode of though the people. We are coming into a democratic when our architecture, to be true, must be expres of such times, and a record of the civilisation. Ar tects have the duty placed upon them of seeing the highest and best forms of that civilisation expressed in the buildings, and all opportuni should be taken of increasing the importance of profession and attracting to it the best minds, s to get a high average of attainment.

Architecture is often spoken about as mainly expression of the emotions, a matter of schol research in purely academic fields, and is taker one of the means of discussion in which grac periods, with pleasant and interesting semi-va generalities, can be displayed to advantage. An has also been said that, in endeavouring to impr the status and opportunities of the members of profession and increasing its importance in the c monwealth, a blow is being aimed at architec itself. Undoubtedly it requires a special bent mind to be an architect, but those with the spe abilities will not be attracted to the profession i does not give reasonable opportunities for adva ment and if it is not considered of practical valu the world. The same qualities which make success as an architect make for success in m walks of life which do give such opportunities offer more prizes and fewer blanks than in our fession.

By far the greatest majority of practising archit have entered into the profession with a view honourably earning a living, carving out a career, making a success of their lives, and not because t were predestined heaven-born architects with h architectural ideals. The very meaning of "pro sional" implies "one who makes his living by his as distinguished from an amateur." Some f without the necessity for earning a living, have ta up architecture as an agreeable and interesting f of education and as a pastime. I have known of s *dilettanti*, but they have had few opportunities work, and, not having the stimulus of necessity, h done little of value, though there is no reason they should not succeed architecturally; and practice of architecture still retains its fascination some of the more fortunate brethren.

Our profession, however, is a serious one, dema ing special qualities of heart and thought, a m ready and receptive, a faculty for artistic expressi with an ability for hard and continuous work, that genius which is an infinite capacity for tak pains. An art, a science, a business, a craft, ar tecture has been called, but the "profession" architecture from which the best architecture, the b expression of the age, has ever to come, is a profess to which should be attracted the best of the hig educated young men of our time, alive to the wa of the age, and appreciating the combination of science, and businesslike qualities which make profession so fascinating and so engrossing. Inst of the improvement of the position of the archit being a blow to architecture, the converse is the ca and it is by improving the position and status of architect that the art of architecture will get its b exponents, and give to those who practise it the p tion in the world the importance of the profess demands. Success the world generally measures the amount of money a man makes—that succes eved by few architects, and the profession never be generally attractive on that ground. But, n the right sort of natural abilities, properly ned, and reasonable opportunities for work, there profession in which the interests are more varied the opportunities for usefulness and happiness ter than in the life of an architect.

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* Extracts from the Presidential Address to the Manchester Societ Architects by Mr. John B. Gass, J.P., F.R.I.B.A.

Architecture and Civic Pride.

s democracy will rule, the fostering and cultiva- of a rightly informed and cultivated mind ng the people will lead to a true civic pride, h will stir up amongst the inhabitants a pride in cities, towns, and villages, and be most ortant for the future of architecture. To the dren architecture and history should be taught ther in all the schools as part of their general ational course, for history is expressed in archi- ure, and both would be made more interesting and g by a true combination. The future would be hopeful by understanding minds then seeing expression of their own time in the modern build- growing around them, and insistence on the ession being right and true. The Institute's orial of July last to the President of the Board ducation is one of the marks of the awakening t in our midst. It welcomes and urges the uragement of the natural activities of eye and l in the teaching of our day-schools. It ally asks "that all must be taught to draw, and manual work and comprehension of the common es of life should be infused. That a town spirit ld be inculcated as the best basis on which to l up a national spirit, and that something should one to bring out the idea of design and gthen initiative in the minds of the children."

a democracy truly educated in that spirit, and ting by it, all things grow possible; thought- e gives a wider scope than now with the narrow which prevails. Citizenship will have a real ing, and the communal feeling be more fully loped in the civilisation of the coming time. A of the values of surroundings in the minds of people—for their living, their education, their , their religion, and their pleasures—will infuse nto architecture, which will then dare to confront break through the old and the time-endeared, profiting by what was of conspicuous worth in xamples.

e higher the outlook of the nation, the greater raining and skill required by those who express the architecture of the time. For our profession ld its place in the ever-quickening march of s a general high standard will be even more sary than at present.

l endeavour must be made to make the profes- of architecture attractive to the best of the young of the nation, and then see that the highest al educational facilities are placed within the of those who can profit by them. For on the y of the student to profit by special education nds the success of that education and its prac- value in the world.

ere have recently been discussions at the Insti- on architectural education which have been very sting. The virile suggestions from the Archi- al Association School have an artistic as well ractical outlook on the present and towards the , rather than the over-worship at the shrine of ast. It was well stated that schemes of archi- al education will always remain schemes unless coincide fairly with the sense of values of the at large, and also that the constructive side rtistic side of education should be run together. both of these statements I am in full agreement. of the speakers, however, dealt mainly with eoretical, both artistic and scientific, part of professional training, which is only the beginning of an architect's education.

Little was said of the vital necessity of a thorough training in the practical and business side of our profession, the only way to make a college or special school education of the real help in a man's career it should be, and of ensuring his having a true and not a false sense of value. An architect has to be in touch with actualities, and the use of practical common sense with experience is essential to a successful career. My personal experience of college-trained youths is not very convincing, unless such training has been simultaneous with office work, when it is of the greatest help and leads to efficiency.

It is probable that the education of the future will have to take into account the State and military service which will be required from our young men at the most impressionable and valuable time of their lives—one, two, or three years from the age of about eighteen. In the future arrangements of State service, consideration should be given to students in all the learned professions, so as to make their specialised training of value to the State. The effectiveness of the scheme of architectural education and the personal capacity of the students will be important factors in determining how far such consideration will be given and maintained to our profession. The branch of State or military service which will utilise the specialised preliminary training and enable our students to take it forward should be organised in the national interests.

Surely those in authority will have learnt the value and necessity of specialised training for efficient service, both public and private, and how to utilise such special training in the country's interest. The proper organisation of the brain power of the community is an absolute necessity if our nation is to maintain its position in the world. That is true national service when each man does the work for which he is best fitted. We have much to learn from our enemy in the way of efficiency of service and organisation. May our nation have wisdom to profit thereby, while retaining the ideals which form such a wide gulf between us and our enemy, and for which our young men are making such tremendous sacrifices, and the country is being burdened with an ever-increasing debt, the taxation for which will cripple its activities for generations. It can only be met by greater efficiency, better organisation, a finer national spirit, and more community of interest in the whole nation.

National Registration of Architects.

For the greater part of the generation I have known the question of the desirability of the national registration of architects has been under discussion. It is under active discussion now, and there is undoubtedly an ever-growing feeling of the necessity for it throughout the country. After many years of consideration, detailed discussion of the 1905 Bill by the Institute Committee hearing evidence on which a report was prepared, and obtaining legal advice, the Institute at a special meeting on January 5, 1914, finally decided to proceed with a scheme of registration by charter as the only practical solution of the question which was considered likely to be agreed to by the authorities at that time. The Council's proposals for the Charter were presented to a special meeting on April 27, 1914, and afterwards published in the Journal.

This new Charter provides, among other things, for the constitution and maintenance of a register of persons qualified for the practice of architecture who would have the right to call themselves "Registered Architects" or "Chartered Architects."

(*To be concluded.*)

MORE ABOUT CHEQUERS COURT.

Mr. P. H. Ditchfield contributes to the "Church Times" an interesting sketch of the historical associations of Chequers Court, the generous and munificent gift by Sir Arthur and Lady Lee to the nation for the purpose of providing an official country residence for the future Prime Ministers of England. We extract a few of the more specifically architectural particulars.

One of the results of this noble gift will be, Mr. Ditchfield observes, to preserve for posterity the noble mansion which has played no inconsiderable part in national annals. As an example of Tudor architecture it is unrivalled. Chequers has suffered not a little from the action of late Georgian goths and vandals who wrought havoc in the old mansion. It underwent painful vicissitudes; but all traces of their handiwork have been removed by wise and judicious restorations, with the primary object of bringing the house back to the appearance and atmosphere intended by its original builders. The sash windows which had been inserted on the south side have been replaced by mullioned windows; the mullions on other sides, which had been altered, have been restored. Some foolish-looking battlements have been removed, and the gables replaced. Most of the stucco has been stripped from the walls and the original brickwork has been exposed to view again. The central court has been covered in and now forms a large and handsome hall, lighted by stained-glass windows in which are the arms of former possessors. The house is now very much the same in appearance as when William Hawtrey built it in 1565, and when poor Lady Mary Grey, sister of Lady Jane Grey, walked through its chambers a disconsolate prisoner.

Chequers remained in the Russell family until the death of Mary Russell at the beginning of the last century, when it passed to her cousin, Dr. John Russell Greenhill, whose son, Sir Robert Greenhill, assumed the name of Russell and was created a baronet in 1831. At his death in 1836 the estate passed by will to his cousin Sir Robert Frankland, who assumed the name of Russell. His widow died in 1871, and Chequers passed to her fifth daughter Rosalind Alicia, who married in 1854 Francis L'Estrange Astley, afterwards Lord Astley of Reading, a descendant of Sir Jacob Astley, who fought in the Civil War, was Governor of Reading during one of its sieges, and commanded the King's infantry at Naseby. The last member of the Astley family, Mr. H. J. Delavel Astley, died without issue in 1912. Sir Arthur and Lady Lee became life tenants of the estate eight years ago, and began their beneficent work of restoring the house and gardens and subsequently acquired the freehold for the purpose of presenting it to the nation.

In the interior the rooms have been altered from time to time, but the magnificent library, lighted by lofty bay windows, and eighty-one feet in length, still forms two-thirds of the upper floor of the west front. The small room in which Lady Mary Grey is supposed to have been imprisoned is at the north-east angle, and now forms an inner drawing-room. The little china closet which opens out of this room is really the staircase by which the lady ascended to her bedroom.

The treasures which Chequers contains are extraordinarily interesting, but are far too numerous to be recorded in this article.

The library contains many rare treasures, valuable early books and choice editions, autographs and manuscripts, but it is impossible to record its varied and interesting contents. It is pleasant to reflect that owing to this priceless gift to the nation, these collections will not be dispersed, but will remain in the house that has sheltered them so long.

Concerning the changes that have been wrought from time to time at the Chequers, Sir Arthur Lee has written to the Press the following generous tribute to his predecessors in the occupancy, and to those by whom he has been assisted in careful restorations:

"So much has been written about Chequers and the architectural vicissitudes through which it has passed in the course of the last hundred years, that I fear less than justice has been done to my predecessors there. The gothicising of the exterior and interior of the house, which took place in late Georgian times, has been rightly condemned on both archæological and architectural grounds, but it was universally admired at the time, and was, I am convinced, carried out with the most reverent and pious intentions.

"Nearly a century later the task of purifying William Hawtrey's house of these disfiguring accretions was commenced by Mrs. Frankland-Russell-Astley and her son, the exterior stucco was removed, and a careful restoration was contemplated and commenced under the skilled direction of Mr. Reginald Blomfield, R.A.

"For various reasons this project had to lapse until it became my privilege to carry it through, on a more complete scale, in 1909 and succeeding years. With the full approval of the late owners, I again called in Mr. Blomfield to advise on all architectural matters, whilst the laying-out of the gardens was undertaken by Mr. H. Avray Tipping. To these two distinguished authorities the credit for the recovery by Chequers of its Elizabethan character and environment is primarily due.

"I am anxious to make these facts known, as some of the published comments have, I fear, been calculated to wound the feelings of some of those who still live, and who loved and cared for the house in the past."

WIDE ROADS AND TALL HOUSES.

At a recent meeting of Birmingham City Council Mr. Talbot outlined the principal features of the arterial road scheme. Emphasising the need for radical change, a definite plan, and new methods, he observed that while forty years ago the width of Corporation Street was considered revolutionary, to-day its footpaths and that portion of the carriageway traversed by trams were wholly inadequate for the traffic. This year's tram receipts would exceed £1,000,000, and the advantages of a sleeper track system were such that £100,000 per annum would be saved in maintenance alone.

Mr. Siward James severely analysed the proposals. He moved an amendment disagreeing with the separate tramway track scheme as submitted, and substituting a width of 85 ft. for 110 ft. of roadway in the built-up areas. Mr. A. H. Stephenson, seconding, contended that a separate tram track in the centre of the city was unnecessary and undesirable.

Mr. Eldred Hallas, in seconding this on the ground that the possibility of tub ways might affect the Council's jud very materially, protested against t necessary cost which the compilati the Public Works' Committee's repo imposed upon the ratepayers. "A cipal election ought to be fought on a tion like this," he said. Wide stree sulted in high tenement buildings. adoption of the scheme would cripple and communal development, and ser jeopardise the building of cottage pr immediately after the war.

Mr. J. W. Kneeshaw welcome scheme because it suggested that th of the municipality was to beautify a as govern.

After further speeches, Alderman ton persuaded Mr. Talbot to agree adjournment of the whole matter.

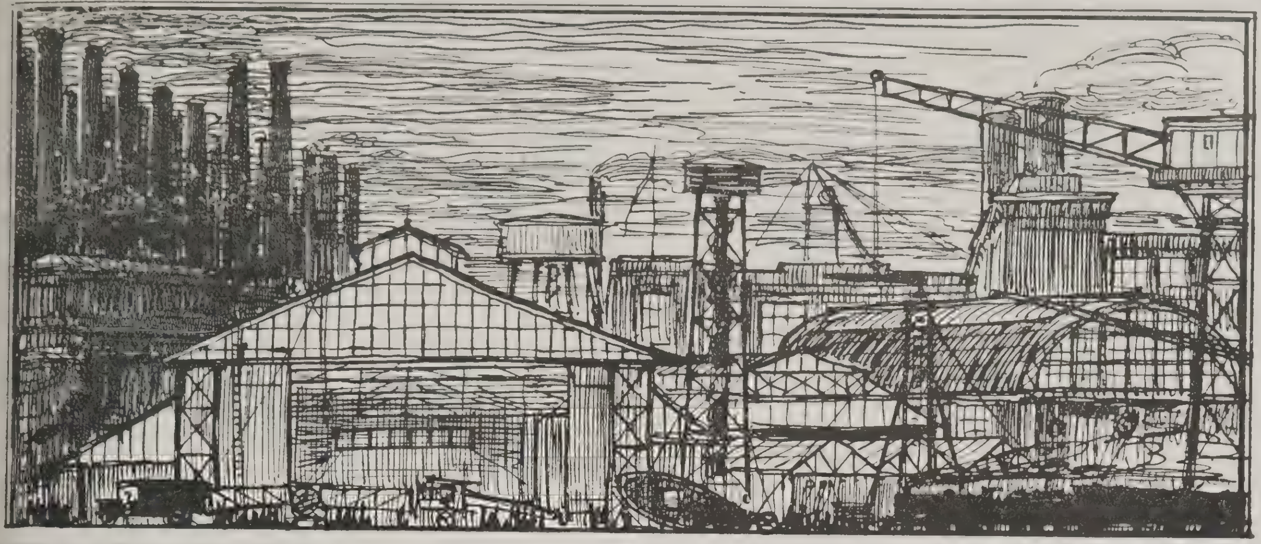
LARGE SCHEME OF BUILI EXTENSION FOR BRIST UNIVERSITY.

At a meeting of Council of Bristol versity Mr. Henry H. Wills for handed over to the University the deeds of the greater part of the Roya property, his purchase of which fro Tyndall trustees was completed on tember 29 last; as well as the title-de an adjoining piece of land on the op side of Tyndall Avenue; the whole am ing to about nine acres of valuable ing land, immediately adjoining the ing University property and occupyi of the most conspicuous sites in the of Bristol.

By this act of generosity the area able for the buildings of the Univer now extended to a total of over th acres, which, as the vice-chancell marked at the meeting, the Univer not likely to want to exceed for centuries to come.

Mr. Wills exhibited a block plan pared by Messrs. Oatley and Law as a suggestion for the distributi future buildings on the central part site, viz., that occupied by the Roya house and grounds. In its genera tures, the plan suggested the distri of buildings round a large quadrang length of which would be upwards hundred feet, or double that of the f Christ Church quad at Oxford. C accepted the architects' suggestion the site for a future new departme physics and for a future residential co the students inhabiting which will en singularly favoured situation. The of land to the west of Tyndall Avenu further placed for the present at th posal of the botanical department f extension of the existing botanical ga

The series of sites now in possessi the University will greatly increase i portance. Including the new B College, which is in association wit University, an unbroken series of giate buildings will eventually extend the palatial front in Queen's Road, the city will equally owe to the liberal the two brothers, Mr. George A. Will Mr. Henry H. Wills, up to the very su of the hill that is now crowned b Royal Fort House. Messrs. Oatley Lawrence's suggested scheme provid the retention of the Royal Fort H which is not only a valuable examp eighteenth century architecture and ration, but also a document in the civi tory of Bristol.



WAR·BVILDINGS·SECTION

A WAR-TIME SANATORIUM AT FAZAKERLEY, NEAR LIVERPOOL.

E sanatorium which the city of Liverpool is building at Fazakerley, urb about five miles from the centre, iated on land to the south of the ng city hospital. As most of the inding fields, and the timbered ds of an old mansion, are the pro- of the Corporation, the future pment of the immediate neighbour- is largely secured.

site is elevated and falls gently ward to a small stream, beyond the eye travels over considerable of pleasant country. Personal ex- ice of living in the neighbourhood that the air is healthy and bracing hat on the hottest of days a gentle is always present. Before the in- n of the sanatorium a portion of the ing hospital had been used for some for the treatment of tuberculosis on rium lines with very favourable s.

building scheme, the result of an competition in 1913, is a comprehen- one, only utilising the laundry, house, and mortuary of the City tal in lieu of new buildings for such ses.

accommodation as provided is ed in seven principal blocks— istrative with dining-hall, dining-, kitchen, stores, and larders, and a n set aside for housing the female tic staff. The medical block ad- has consulting and lecture-rooms, tory and dispensary, and, to the front, residential rooms for the al staff other than nurses. For a home has been built facing standing somewhat apart on the t portion of the site.

three chief blocks for patients are to the south of the administrative and stand on the edge of the slop- rtion of the field. By this means ommand the finest views and catch anest air, and are away from the roads and the entrance to the institution. The three blocks consist of one, to the west, for the male ambulant patients, and a similar building for women on the east, with a central nursing block for both sexes.

The twenty-five beds for children are in a smaller one-storeyed building away from adult quarters, and in the most secluded corner of the site.

The entrance roadway will be arranged through a winding avenue of trees from the lane some distance to the west of the site, and is commanded by the lodge, in which accommodation will be provided for the porters. From this point the effect of the buildings and the wide grass lawns and flower-beds will be that of a large open quadrangle, with the medical block in front and the nurses' home and men's pavilion respectively to the left and right.

On approaching the medical block, the drive will branch on the one hand to the left and northwards for administrative services; and on the other hand southward and eastwards between the administrative and patients' blocks. In the original design, the space as formed was quadrangular, but though some of this spirit has been lost in a more recent rearrangement of plans a pleasant and sheltered garden will be formed here, bounded on the north by the long line of the dining-hall and southwards by the rear of the hospital.

This latter building is advantageously near the kitchens, and consists of four wards for eight, eighteen for two, and eight for one bed apiece, or seventy-six beds in all; and has three duty-rooms, a service-room, four lavatories, and six bathrooms.

The men's pavilion is on simpler lines, it being assumed that all patients will be active cases. This has four wards for twelve and sixteen for two beds apiece, or eighty in all, with two duty-rooms, four lavatories, and eight bathrooms. The women's pavilion is in all respects similar to the men's, but with four wards for eight instead of twelve, and therefore accommodating sixty-four patients.

The children's block accommodates twenty-five in four, two, and one bedrooms, mostly divided by glass windows and divisioned in the centre by the duty-room—boys on the one hand and girls on the other.

The architects have made a point of providing to all wards some one or more pairs of doors opening to exterior verandahs or paved spaces; most of these have sufficient cover to permit of sleeping out in fine weather. This is all arranged without the least loss of sunshine in the wards.

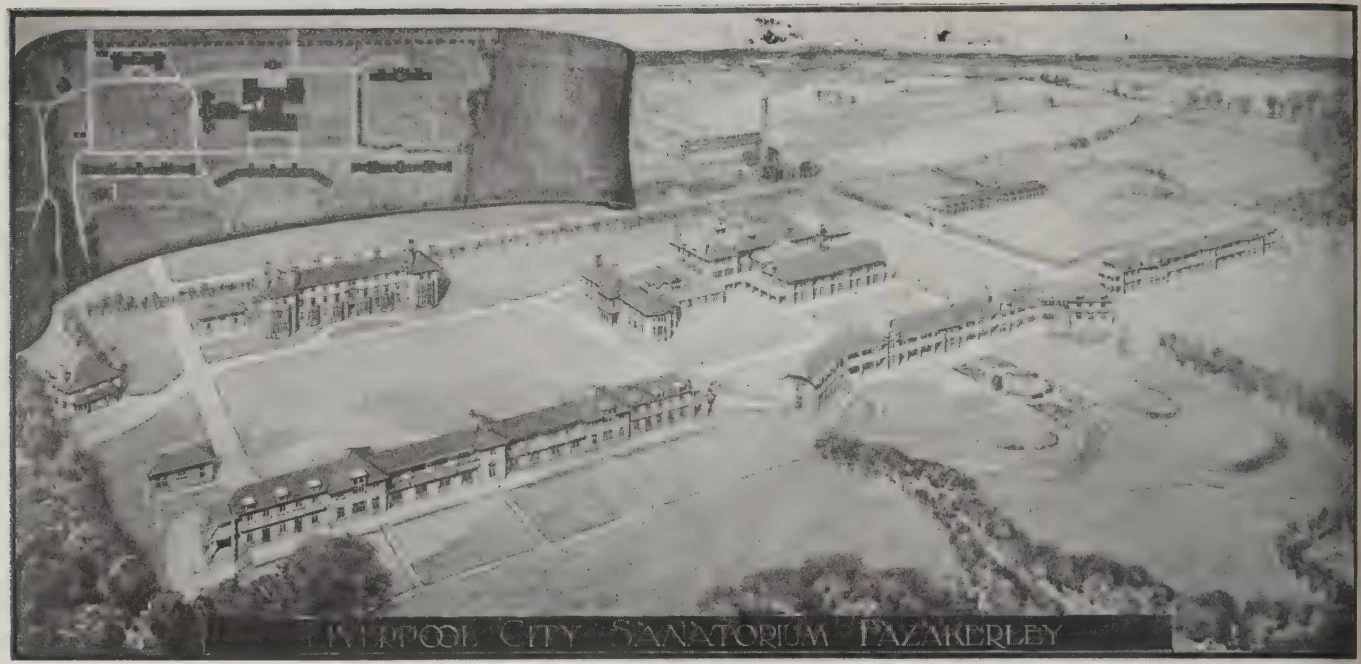
The sex division, a not unimportant point, will be nearly perfect without any very apparent marking of such limitations.

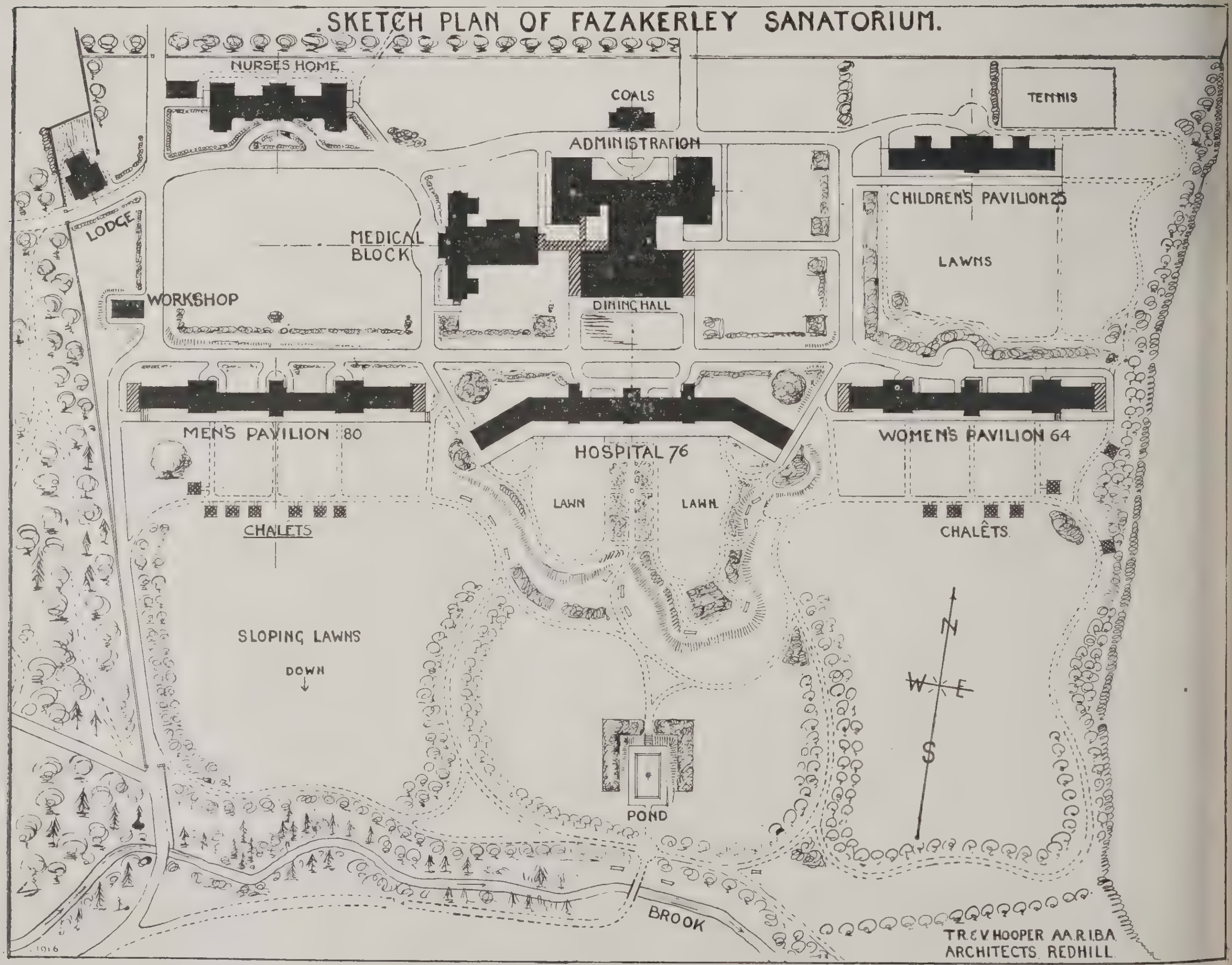
In the administration block all the storage, cooking, and service of food is centralised, and ample storage and service is also provided for the hundred-and-one articles required in such an institution; whilst in the medical block the more detailed examinations can be carried on in perfect quiet and be coupled with research and lectures to medical and patient classes.

The buildings are faced with St. Helens brick, in places relieved with terra-cotta dressings and portions of white cement stucco, and have grey slated roofs.

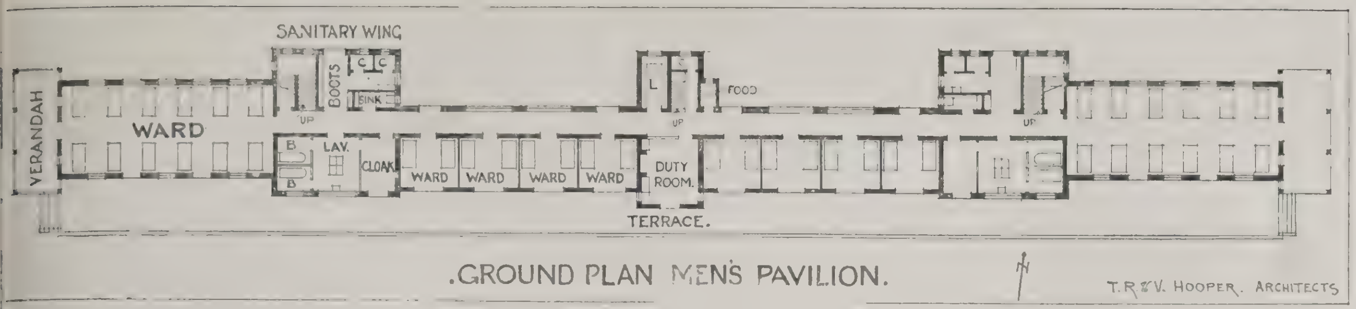
The windows are nearly all of one pattern, a pair of side-hung sashes below a pivot-hung fanlight, and by means of special stays the lower casement is close back against outside walls quite out of the way, and leaving a clear void. Doors to verandahs and open pavings conform to this idea, being cut on the lock rail so that the upper portions can be open, if necessary, with the lower portions closed.

In most wards some one or more window-panes are of fine copper mesh in lieu of glass; this keeps out all snow and rain, and permits the ingress and egress





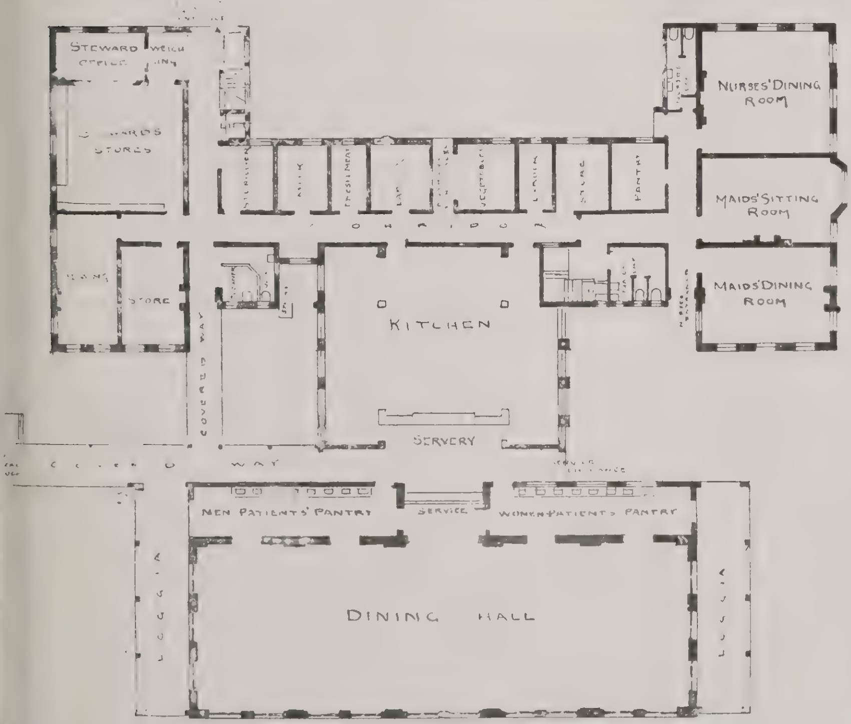
LIVERPOOL CITY SANATORIUM, FAZAKERLEY. T. R. AND V. HOOPER, AA.R.I.B.A., ARCHITECTS.



LIVERPOOL CITY SANATORIUM, FAZAKERLEY: GROUND PLAN OF MEN'S PAVILION.

r should the weather be exceptionally e, and the windows of necessity wholly artially closed.

e conditions governing a climate such hat of Liverpool dictate a building ble of being more or less protected against the severest weather, and it is felt that, however admirable the open verandah type of sanatorium is for some climates, it was advisable in this case to provide buildings capable of being closed. The arrangement and type of windows adopted, however, will admit of the best possible ventilation, and there is no reason why the air of the wards should ever become vitiated.



VERPOOL CITY SANATORIUM, FAZAKERLEY: ADMINISTRATIVE BLOCK AND DINING-HALL.

T. R. AND V. HOOPER, AA.R.I.B.A., ARCHITECTS.

There is to be a central plant for domestic hot-water, and also a certain amount of low-pressure hot-water heating, more for airing the wards than heating them. For the runs of the necessary pipes an ample system of subways has been formed to connect the blocks with the boiler-house.

Sputum will be disposed of by steam destruction in a special room near the boiler-house, and adjoining it there is already both a disinfector and a destructor forming a kind of disinfecting centre away from the main buildings.

The total accommodation in permanent buildings as now built is 245, but extension with châlets will be an easy matter, as the permanent buildings comprise sanitary and administrative accommodation for a greater number.

The cost will exceed £250 per bed on the above number, but additional beds, as before explained, can be added at such a moderate figure that the buildings cannot in any way be considered expensive.

It is proposed, in course of time, to lay out the site around the buildings as grass and flower gardens, with shrubberies and trees, to get protection against searching winds. The influence of such surroundings upon patients drawn from a large city will probably be more helpful than a series of extensive views, although for this part of Lancashire the outlook is pleasant and unobscured.

The architects are Messrs. T. R. and V. Hooper, AA.R.I.B.A., Redhill, Surrey, and the contractors were Messrs. William Hall and Son, Ltd. Completion is hoped for in 1918.

WAR CONDITIONS AND THE EFFECT ON WAGES.

Barnstaple Building Trades Federation, at a public meeting presided over by Councillor T. H. Hodge, unanimously passed a resolution deploring the condition of a large number of the working classes of the town brought about almost wholly by the extraordinary rise in the cost of living, calling upon men and women workers to improve their present position by joining trade unions and urging employers to give the best possible consideration to demands that might be put before them. Representatives of different branches of trade unions spoke to the resolution. It was stated that the value of a sovereign was down to 9s. 6d. in July, and that it would take 52s. 3d. to purchase in food what could be obtained for 22s. 6d. in 1904. It was held that requests for increases in wages were therefore not unreasonable. The point was also emphasised that overtime must not be worked after the war if there was to be no physical deterioration of the race; and that with working hours properly regulated a place must be found for every man who, having fought in the battle for freedom, was willing to place his services at the disposal of his country.

RESTORATION OF WHITEKIRK CHURCH.

The restoration of the ancient parish church of Whitekirk, East Lothian (which was partially destroyed in February, 1914, as the result of incendiarism), has now been completed under the skilled supervision of Sir Robert Lorimer, Edinburgh. The following description of the renovated building is by the minister of the church, the Rev. J. T. Soutter: Under the care of Sir Robert Lorimer the building has not only risen from its ashes, but has regained much of its pristine beauty which was so rudely marred by architects of the eighteenth and early nineteenth centuries. Both outside and inside it has refound its ancient dignity and beauty, and it is not too much to say that when the war is over and the restoration completed there will be few, if any, finer churches in Scotland.

Exterior Changes.

Of the exterior changes the most noticeable is the raising of the nave roof and west gable to their former height. This portion of the building had been re-roofed in modern times at a comparatively flat pitch, which caused it to have a dwarfed appearance beside the massive tower and high vaulted choir. The change has added much dignity and given a pleasing symmetry to the whole building. The roofs have been covered with old stone slates, those in use before being utilised as far as possible and the lichen on them carefully preserved. To make up the deficiency old slates of a similar character were collected, and the effect now presented by the roof is one of the beauties of the structure. The gable of the south transept has been rebuilt in complete sympathy with the rough character of the masonry and finished with crowsteps like the mediæval porch and east gable. Indeed, the greatest care has been taken throughout to make the character and texture of all the new masonry in sympathy with the old. The window tracery also shows this care. In the restoration the tracery of the old choir window has been taken as a model. The beautiful south-west porch, which is unique and is one of the most striking features of the church, suffered no injury from the fire.

Treatment of Interior.

The changes within the building are more marked than those without. Only one real structural difficulty presented itself. The walls of the tower are of great thickness and immense weight, and the sandstone arches which support it had been so severely burned that soon after the fire cracks began to develop in an alarming manner. To attempt the removal and renewal of the old arches would have been dangerous. New arches were therefore built within the old arches, and the piers were faced with new stone carefully bonded into the old piers. Liquid cement grout was then forced by hydraulic pressure into the old masonry above the new arches, the whole structure of the tower being thereby consolidated. The stone walls of the choir suffered considerably, and were scaling badly in many places. No attempt has been made to reface these walls, and only the roughest of the unevenness has been removed. The walls of the nave and transepts have been covered by a plaster having a rough texture and being finished with whitewash. The high vaulted stone roof of the choir has survived, though its surface is charred. The roofs of the nave and transepts are finished in Scotch oak boarding, divided by moulded ribs, with carved bosses at the intersections. The vaulted roof of the tower, which was formerly plastered and had plaster ribs, has been finished with stone ribs and rubble masonry infilling.

Omission of Galleries.

The furnishing of the church cannot be completed till the war is over, but its plan is already apparent. The galleries will not be repeated. The Haddington Gallery in the north transept, which was introduced in 1762, has gone, making way for a handsome tracery window in the north wall, while the absence of the staircase which led to this gallery has allowed the vestry and session-room to be placed outside and east of the transept, instead of within it as formerly. The lean-to gallery on the north side of the nave, which was erected in 1832, and which MacGibbon and Ross likened to a large Dutch cabinet, has been transformed into an aisle, known as the Seacliff Aisle, which adds much grace and charm to the building. The classical erection in wood which was placed against the east wall of the church, where the mediæval altar and reredos had stood, and which formed the pew of one of the principal heritors, has also gone, giving place to the holy table. The lovely choir, built in 1439 by Adam Hepburn of Hailes, "all arched with stone, agreeable to the mode of Peter de Main," will now be used as a choir, and will be furnished with suitable stalls facing north and south.

Memorial Windows, Font, and Holy Table.

The stained-glass window in the west wall of the church in memory of the late Countess of Haddington has been reproduced. In the Seacliff Aisle a four-light window—a beautiful example of design and craftsmanship in stained glass—has been erected by Mrs. Laidlay. The south transept has a small trefoil window in the gable, it being the intention to place the organ against this wall. This window has been filled with stained glass by the Rev. Dr. Hately Waddell. The interesting little quatrefoil window at the east end of the choir has been filled with a beautifully appropriate piece of stained glass by Sir James Balfour Paul in memory of his brother, a former minister of the parish. All the other windows are meantime filled with crystal glass in diamond-shaped panes. At the west end of the church below the Haddington window stands the baptismal font, and near the east end has been placed the holy table. Both of these are made of similar stone to that of the building. They are the gift of the late Earl of Haddington and his family in memory of the late Lord Binning. The pulpit, which is of Scotch oak, richly and beautifully carved, stands against the south pillar and faces nearly west. It is the gift of the late minister, the Rev. E. B. Rankin.

Sir Robert Lorimer, A.R.S.A., of Edinburgh, who has so successfully carried out this important work of restoration, is, it will be remembered, the architect of the chapel of the Knights of the Thistle at the cathedral of St. Giles, Edinburgh.

NEWS ITEMS.

Radley War Memorial.

At a meeting of subscribers to Radley War Memorial Fund it was solved that the memorial should take form of a monument or cross in College precincts.

Memorial in Truro Cathedral.

At a recent meeting of the "Tr Cathedral Committee," of which the Lord Mount Edgcumbe was chairman nearly forty years, it was unanimously that a tablet of suitable design and mater should be placed in the church to co memorate more especially the great s vices which he rendered to the Diocese a Cathedral. It was also thought that, one of the niches of the porch of the sou transept, kept for small statues of emin Cornishmen and benefactors of the Cat dral, his figure should be included.

After-the-War Building Problems.

The Building By-laws Committee, investigations of which were suspend some time ago, is now in process of rec struction, and will resume its work im diately. The sittings of this body w synchronise to some extent with those the Committee which has just be appointed, under the chairmanship of J. Tudor Walters, M.P., to inquire i the question of building construction connection with the provision of dwelli for the working classes. Mr. Herb Lewis, M.P., was the original chairman the Building By-laws Committee, and place has been taken by his successor the Local Government Board—M Stephen Walsh, M.P. Another vaca has been caused by the death of Mr. Pointer, M.P. for the Attercliffe Divisi There are several well-known experts u Sir Tudor Walters's Committee, includi Sir Aston Webb, Mr. Raymond Unwin, Charles Allom, Mr. James Boyton, M. and others.

Basic Slag Supplies.

In view of the demand for basic slag statement of the position as regards sup may be of interest. All the available ba slag of the usual grades (says the "Dev and Exeter Gazette") is being ground, a the total tonnage produced is in excess pre-war figures. Every effort is bei made by the Ministry of Munitions, acti in conjunction with the Food Producti Department, to increase the total supp and it is probable that the output for year 1917-18 will reach 500,000 tons, compared with about 400,000 tons in earl years. As no export is now allowed, whole of this quantity is available for ho consumption. The demand is, howev much in excess of the supply, and whole of the estimated production up May 31 next has been sold by makers delivery to agricultural merchants, whom farmers should send their orde The only means of increasing the out further is by grinding certain accumutions of the lower grade slags which ha not hitherto been utilised. Tests of so of these have given satisfactory resu and arrangements are being made for manufacture and distribution of a c siderable quantity. The bulk of the o put will, however, need to be used withi reasonable radius of the works, as its l phosphatic value will not justify hea transport charges. Apparently, therefo very little of it will be available for c creting, etc.

(*Continued on page* xi.)

(*Continued from page* 198.)

Manchester Housing Scheme.

he housing problem in Manchester has ome so acute that steps are now being en to minimise this difficulty. It is ounced that the Sanitary Committee in negotiation with a view to the purse of an estate in South Manchester on ch municipal houses will be erected.

earch Work on Building Materials.

Ir. G. W. Humphreys, chief engineer he London County Council, has been ointed a member of the Government nmittee which is to undertake research k in connection with the employment of materials and new methods of build- construction.

amous Buildings in the War Zone.

Ir. James A. Swan, F.R.I.B.A., has n appointed by Wolverhampton Educa- . Committee to give a course of illus- ed lantern lectures on "Famous Build- s in the War Zone," including Paris, eims, Antwerp, Ypres, Bruges, Brus- , Rome, Venice, and Constantinople. Swan has been also lecturer on archi- ure and building construction at the ool of Art.

Garden City at Warrenby.

At a meeting of Guisborough Rural ncil it was reported that satisfactory gress was being made in the erection of ses for Messrs. Dorman, Long, and 's garden city at Warrenby, 267 work- 's dwellings being in course of con- ction, of which 33 had been roofed. main streets had been made, and the ng of the main sewer has now been un.

Cement Exports to Holland.

the House of Commons last Wednes- , Mr. L. Harris said, in reply to Briga -General Page Croft that the total orts of cement to Holland from all s of the United Kingdom during ust and September were 18,404 tons, of which was consigned to the Nether- ls Overseas Trust under guarantee inst re-export. Latest Dutch official rns showed that during the first half of year not only had there been no orts whatever of cement by Holland to er Germany or Belgium, but that dur- that time Holland had received from many about 90,000 tons. At the ent time the export to Holland was ibited, and no licences were now being ed.

The Lincoln Statues.

the House of Commons, on ober 22, Sir A. Mond (First Commis- er of Works), replying to Mr. Butcher, it had not been the custom in the past the First Commissioner of Works to r into formal consultation with any of experts as to the artistic merits of one statue to be erected on Crown pro- y, nor did he know how any such body d effectively consider the wide diver- e of views which existed in all matters art. "I now understand," said the t Commissioner, "that the American mittee for the celebration of one dred years of peace are anxious to send plica of the statue of President Lincoln ntly erected at Cincinnati and executed Mr. George Gray Barnard, a sculptor he highest standing, which they con- r to be a superior monument to St. dens's statue, and I do not consider I should interfere with the selection le by the donors, who, I understand, comprise men of well-known artistic standing." Mr. Butcher: Has the right hon. gentleman had an opportunity of seeing either of these statues, or has he got any report upon their artistic or other merits? Sir A. Mond: I have seen reproductions of the statues, but I have not had an opportunity of seeing the statues themselves. I have had various accounts of their merits, and opinions differ, some preferring one and some the other.

CONCRETE FOR COTTAGE BUILDING.

"We are a wasteful nation," says a writer in the "Sheffield Daily Telegraph." "We are tipping, at considerable cost, thousands of tons of good building material, suitable for house-building, and we are importing millions of bricks, at great cost, into the city. In many parts of the country concrete houses have been built economically. Being at Wallasey some four years ago, I noticed a pair of houses being constructed very rapidly, from inside scaffolding, and, being curious, investigated the system. A workman stood on the inside scaffolding, manipulating a patent box or moulding machine. Two others supplied him with material in buckets. With a small hand rammer he consolidated the material in the box, turned four thumb-screws, loosened the box, took out a centre piece, and slid the box into a new position, leaving behind two walls, 2½ in. thick, with a two-inch cavity. The material used was damp sand, pebbles, and cement. The work was as simple as making sand pies on the seashore with a child's bucket. Working round the walls of the pair of cottages, he added 12 in. per day, so that in twenty-one working days he had built walls 21 ft. high. The material was six parts of aggregate to one part cement, damped with sufficient water, and well mixed. 'How does this compare with bricks for cost?' I asked. 'Oh, much cheaper than bricks at 20s. per thousand, and, because there is a cavity, much warmer in winter and cooler in summer.' In this case the sand and pebbles were on the spot. Getting in touch with the patentee, I found that the Babcock and Wilcox Company, of Glasgow, were erecting cottages for their workpeople, using boiler ashes and cement. The photographs of these houses were quite pleasing. The next thing was to erect two as a sample, and, although war time made it difficult, the results have been quite satisfactory. Special permission had to be obtained from the local building authorities, because the walls are only 7 in. thick instead of 9 in. When the concrete has been up three months, however, the wall is said to be five times stronger than a 9-in. solid wall. Starting with broken stone and sand at 4s. per ton, delivered, I then tried boiler ashes at 2s., and found the latter made the better concrete. For finish, the houses were rough-cast and colour-washed. An experiment in roofing has also been fully justified. A thick quality of tarred felt was nailed to the roof timbers. Each layer of felt was well overlapped, and pasted down with hot tar, so that the roofs were wind proof, rain proof, and snow proof. Then the laths were put on and the roofs tiled. In the strongest gales the houses are warm and snug and free from draughts. With two rooms and a scullery (with a table-top bath) and with three bedrooms, these houses are a sample of what might be done with the material that is being tipped as useless rubbish."

LEGAL.

Builder Fined for Employing Munition Worker.

Admiralty v. Hughes.

October 15. Before the General Munitions Tribunal for the Liverpool District of the North-west Coast Division, Mr. A. J. Ashton, K.C., Chairman.

Evan Hughes, jobbing builder, Birkenhead, was summoned at the instance of the Admiralty for employing John W. Williams, who, "within the last previous six weeks had been employed on or in connection with munition work, and who did not hold a leaving certificate." The alleged offences occurred during the months of July, August, and September this year.

Mr. J. Paxton, who appeared for the Admiralty, explained that the summons was under Section 7 of the Munitions Act, 1915, as amended by the Munitions Act of 1916. The man, John W. Williams, was employed as a plumber's labourer at Messrs. Cammell, Laird's, Birkenhead, a controlled establishment, whose employment he entered in January last. In March he was employed by Hughes, in whose establishment he had been before the war. On March 20 Cammell, Laird's wrote to Hughes pointing out the penalties he was incurring by employing this man, who had not had a leaving certificate from them. The defendant, in reply, promised not to engage Williams again. On September 17 Mr. Ramsden, representing the Shipyard Labour Department, called on Hughes and asked him why, as an employer, he had not posted in his office a list of his employees, as he was required to do. He replied that he had nobody working for him, and that he did all the work himself. It was found that the defendant had paid Williams 17s. 4d. for the week ended July 13, 3s. for the week ended July 20, £1 2s. 4d. for the week ended July 27, £1 7s. for the week ended August 10, £1 1s. 4d. for the week ended August 24, and for the last week in September, £1 5s. 8d. Williams was a man of about thirty years of age, and, said Mr. Paxton, was enjoying the protection of exemption from Army service on the ground that he was working on munitions. The Admiralty regarded this case as a serious one, and thought it was a case where the full penalty, £50, should be imposed.

Mr. Tudor Jones, who appeared for Hughes, admitted a technical offence. His client was a jobber and worked himself. His son had had to join the Army, so that he was left entirely on his own to carry on his little business. The only way in which Williams had done work for him was this—when Williams presented himself in the evenings or on Saturday afternoons he gave him some odd jobs to do. Defendant was under the impression that he was entitled to employ him when he was not engaged at Cammell, Laird's—that was in the man's own time, and that was the reason he was taken on again after receiving the notice from Cammell, Laird's.

The Chairman, having conferred with the assessors, said that they could not accept the story that Williams was supposed only to work in his spare time. They would not inflict the full penalty, but they had decided to inflict a fine of £25 and five guineas costs.

PUBLISHER'S ANNOUNCEMENT.

THE question of the cost of Advertising is governed entirely by the circulation of a publication. The prices for small Advertisements enumerated below are framed upon the lowest possible basis in order to allow the use of the columns of the Journal for "Wants," &c., at a figure well within the reach of everyone.

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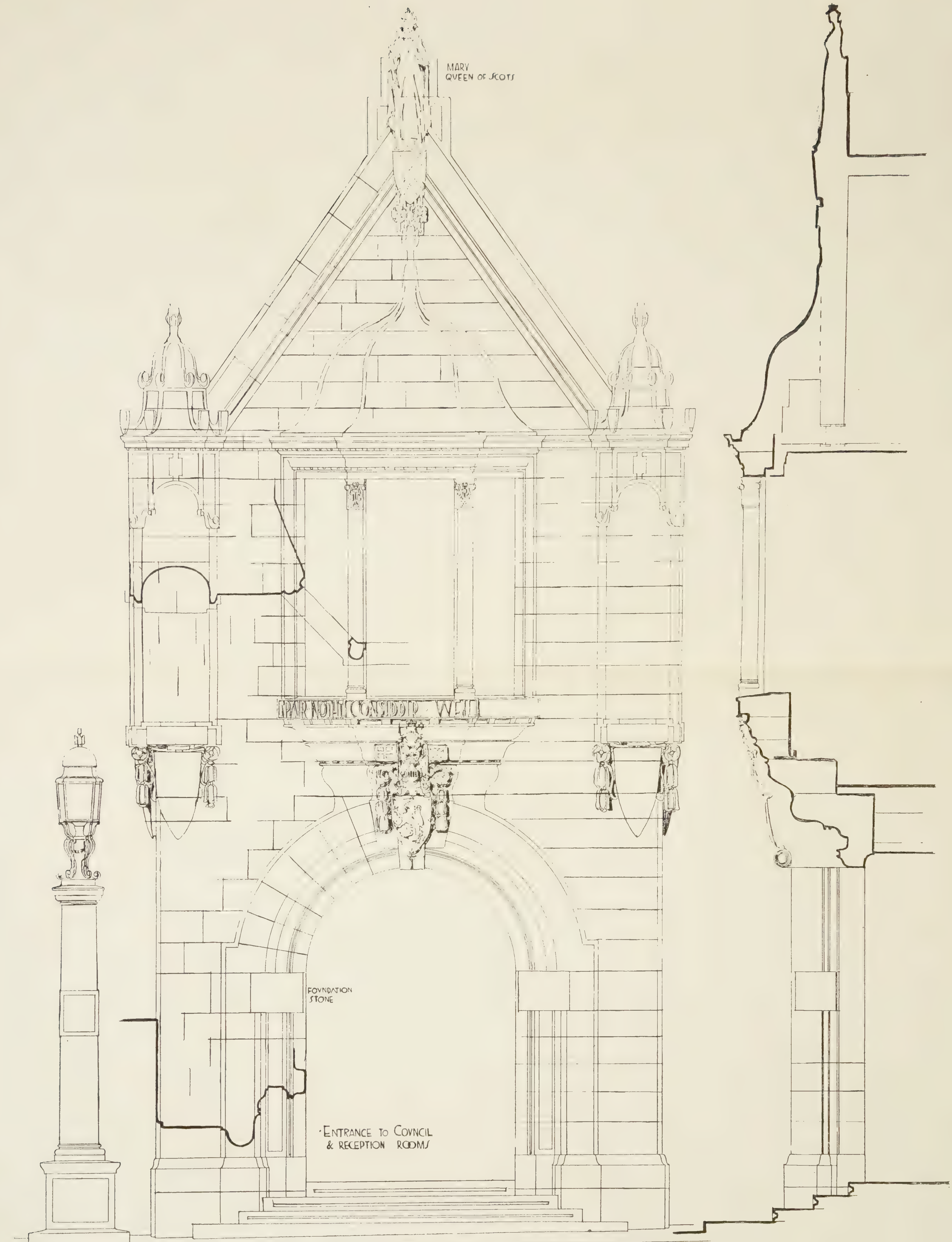
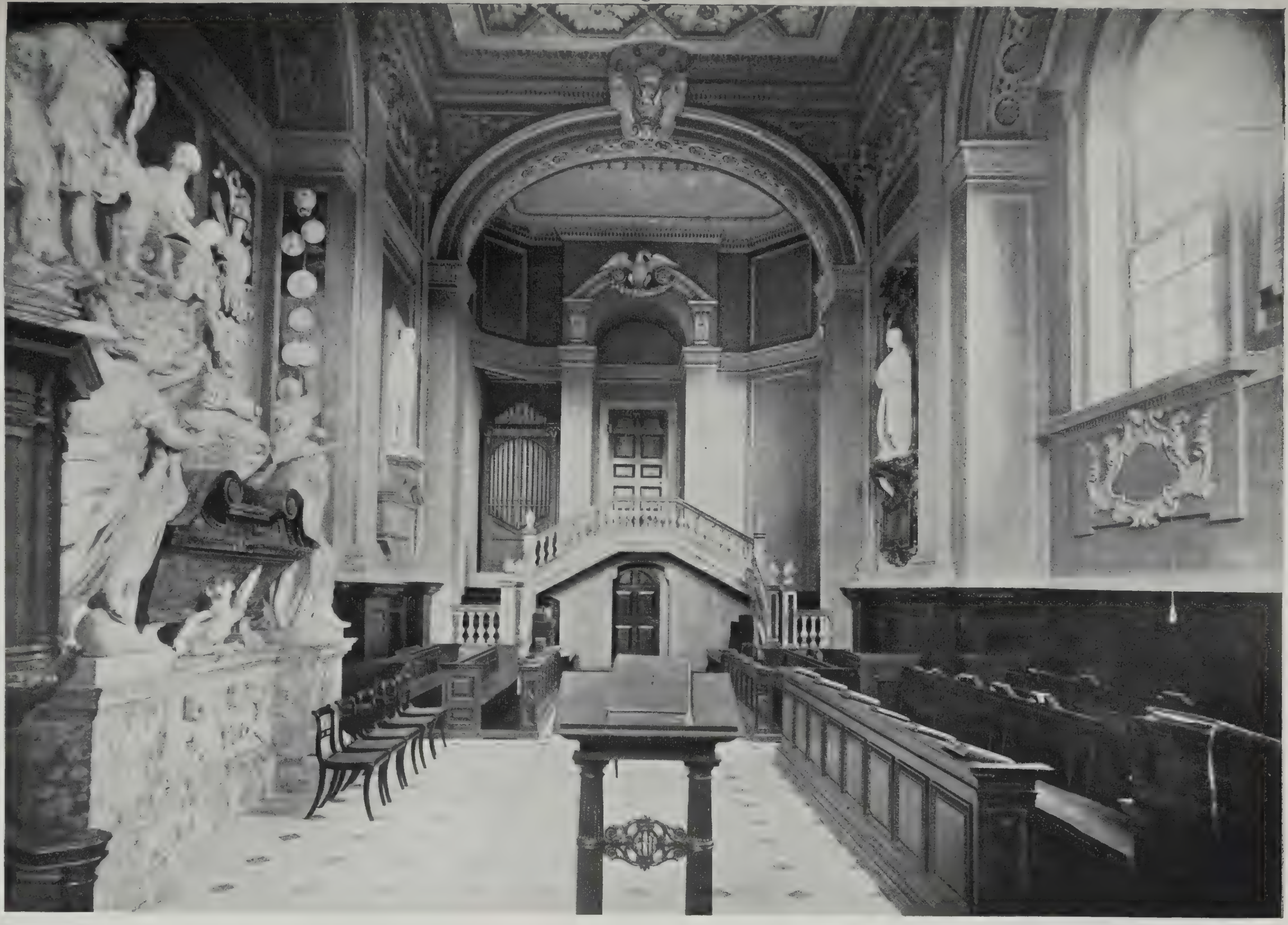


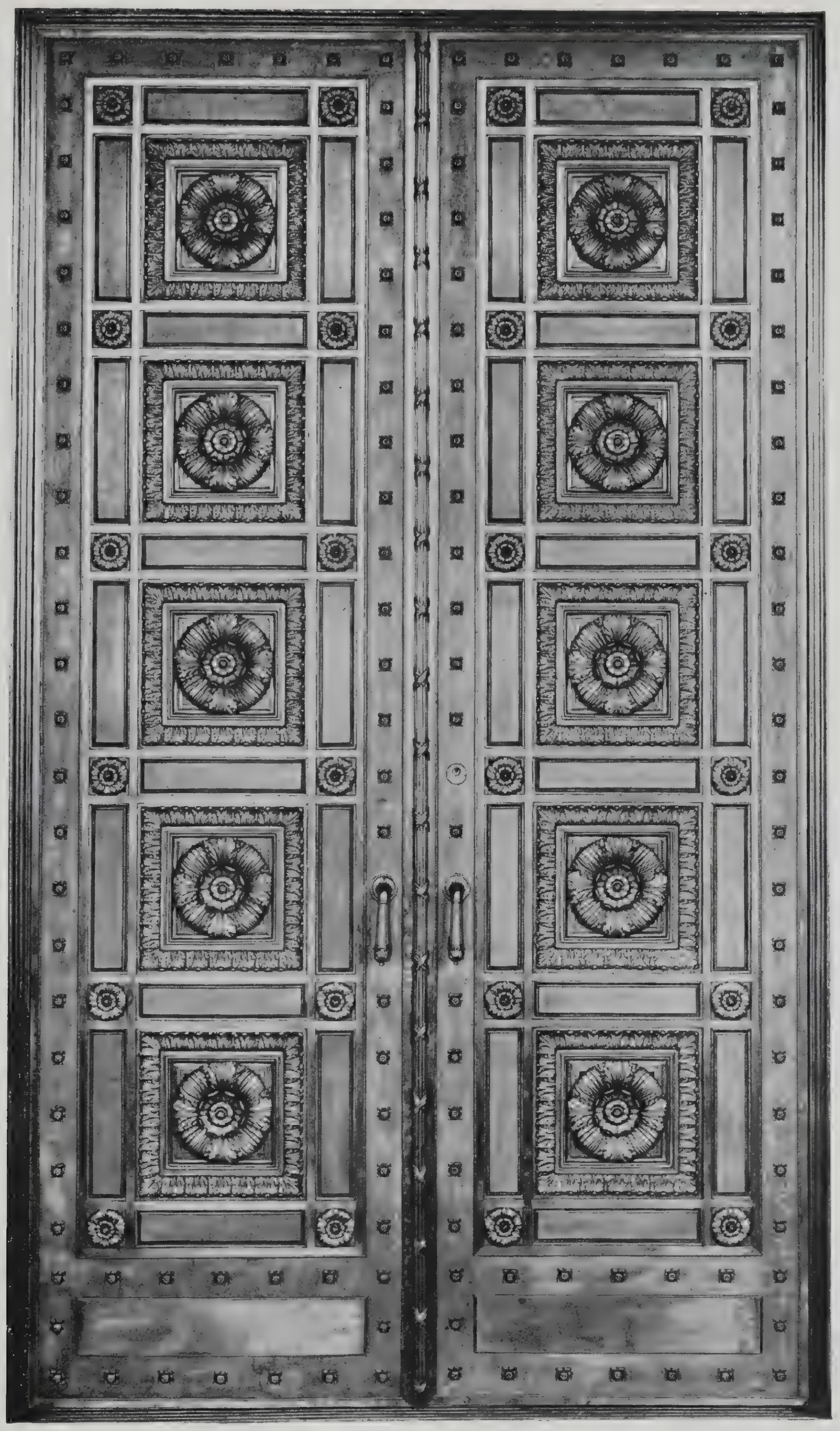
ARCHITECTS' WORKING DRAWINGS (SERIES II.). L.—MUNICIPAL BUILDINGS, STIRLING: DETAIL OF ENTRANCE TO COUNCIL AND RECEPTION ROOMS.

J. GAFF GILLESPIE, F.R.I.B.A., ARCHITECT.



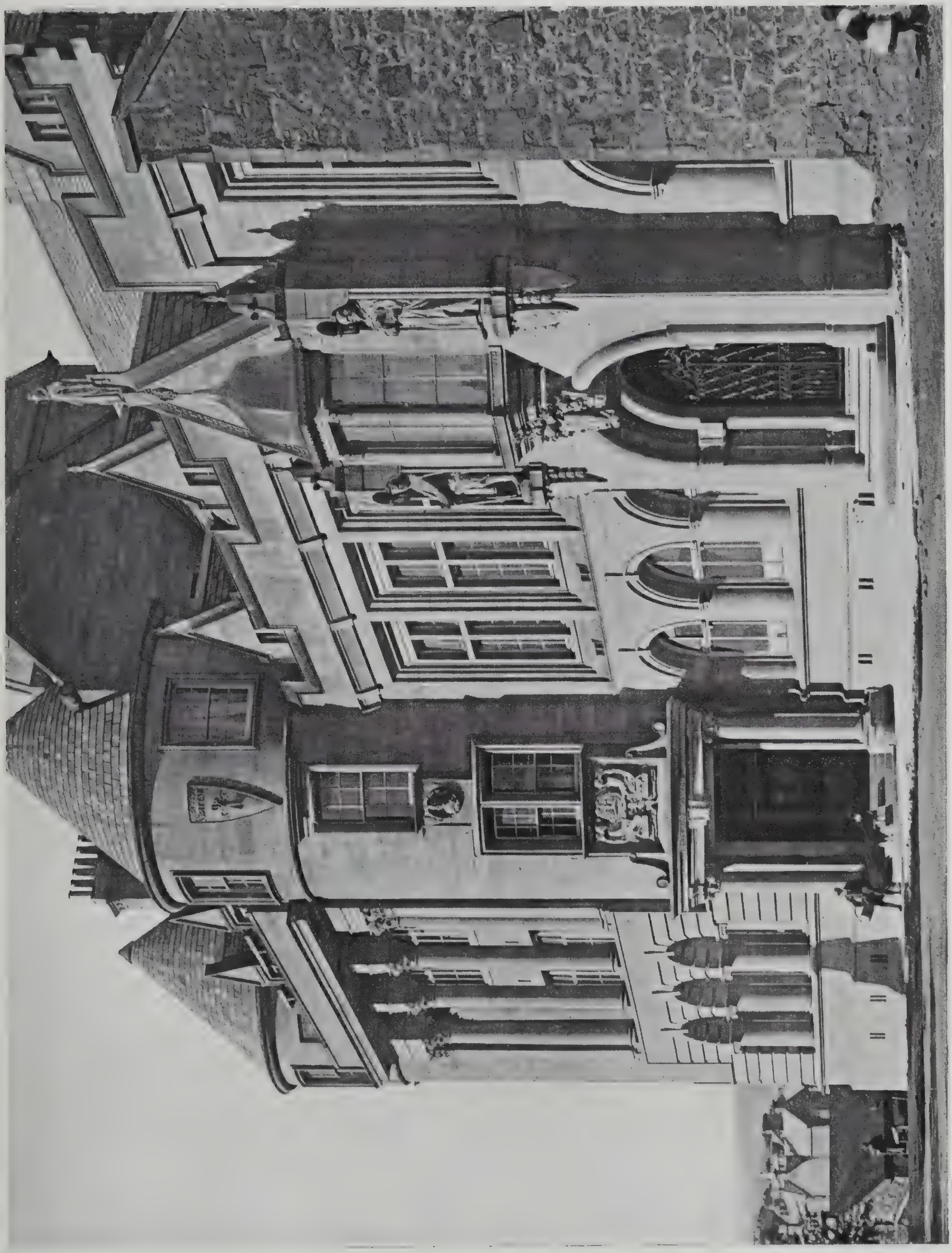
MONUMENTAL ARCHITECTURE (SERIES II.). XXX.—BLENHEIM PALACE, WOODSTOCK, OXFORDSHIRE: THE CHAPEL.

SIR JOHN VANBRUGH, ARCHITECT.



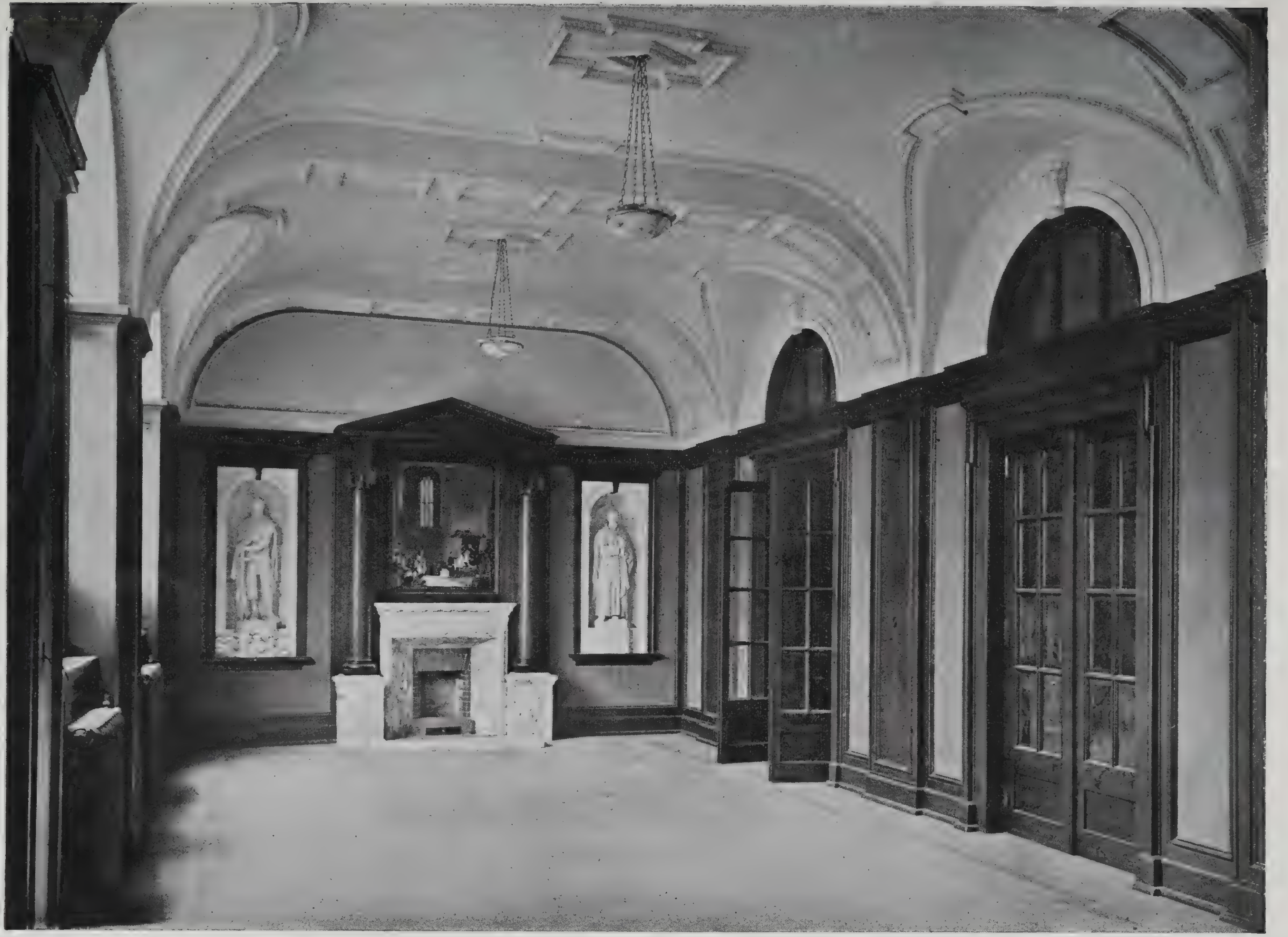
DETAILS OF CRAFTSMANSHIP (SERIES II.). XLIV.—BRONZE INTERIOR DOORS, ROYAL BANK, WINNIPEG.

CARRÈRE, HASTINGS, AND BIRD, ARCHITECTS.



CURRENT ARCHITECTURE (SERIES IV.). XXX.—MUNICIPAL BUILDINGS, STIRLING.

J. GAFF GILLESPIE, F.R.I.B.A., ARCHITECT.



CURRENT ARCHITECTURE (SERIES IV.). XXXI.—MUNICIPAL BUILDINGS, STIRLING: RECEPTION ROOM.

J. GAFF GILLESPIE, F.R.I.B.A., ARCHITECT.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

NOVEMBER 7, 1917. TOTHILL STREET, WESTMINSTER. VOLUME 46. No. 1192.

NATIONAL PAPER ECONOMY.

*ving to the very necessary Government restric-
on paper supplies, all elements of waste must
gorously excluded. Our readers, we are sure,
gladly assist in promoting this object, which is
em in national economy. They can co-operate
us effectually in either of two ways—(1) By
ng a direct subscription for this Journal, or (2)
acing with a newsagent an order for its regular
ery. Casual purchases—now here, now there—
a serious discrepancy between supply and
nd, and cause a wastage of effort and materials
could obviously be reduced to a minimum but
he casual and erratic purchasing which we
stly ask our readers to avoid.*

OFESSOR LETHABY would seem disposed
to deny us our harmless, necessary jargon. At
the eighth informal conference held by the
A., he protested—if that word is not too harsh to
ibe what the speaker himself called "a little
ing personal note"—that "we are getting to talk
v cant language—this talk about 'concept,' 'a
on of the problem,' 'expression in terms of
y,' and such things, which sound awfully well."
ides us so gently, and has so thoroughly earned
ght to tutor us, that to contradict him is almost
t of impiety. Nevertheless, we venture to agree
those who think that his discipline is a little too
No doubt he is right in the main. Our vocabu-
s the stronger and healthier for occasional prun-
only, is there not a tendency to make rather too
use of the knife—to "cut back" a little too drasti-
One sees quite clearly the excellence of Pro-
Lethaby's intention, the general sanity of his
"Fine words butter no parsnips." Phrases
re hackneyed lose much of their original force.
thoughtlessly, they are heard heedlessly, and
ecome a substitute for thought in him that gives
im that takes. That is a danger, but it can be
exaggerated and as easily avoided. These
nary phrases are not cant because they are fre-
ly used. They become cant when they are used
erely, hypocritically, or ignorantly—when they
erely vain repetitions, parroted by persons who
them for no better reason than that, as Professor
by says, they "sound awfully well." That these
es are subject to abuse is not a sufficient reason
stidiously discarding them. It would be foolish
feit the convenience of having ready to hand a
form of words that summarises happily, as these
often do, certain accepted propositions. Why
we be put to the trouble of paraphrasing them,
tuting something that is nearly sure to be less
y expressed, and, because unfamiliar, less intelli-
In considering whether to retain them or to
them, the decision should depend on whether
nlighten or whether they befog, and whether or
ey exalt memory above judgment.

* * * *

very trade its terminology; and we are inclined
y the superior virtue which Professor Lethaby
ites to other professions. "The people who do
rk of the world," he says—"doctors, scientific
ngineers, and so on—do not talk language of
rt." That is because the language must suit the subject. It is an unfair comparison. Men of science, dealing mainly with matters that are concrete, objective, have only to call a spade a spade; whereas abstract thought—say on matters of art—can seldom be expressed with the simplicity and precision that are necessary to the doctor and the engineer; who nevertheless have their clichés, their jargon, their mannerisms of style. It is notorious, also, that the law is infested with set phrases of inveterate persistency; that theoretical science is seldom expressed otherwise than "in good set terms"; and that if the clergy had no "consecrated phrases" their theology would be suspect. While, however, we venture to urge these items of mitigation, we must confess that we are always glad of Professor Lethaby's little homilies on the choice of words. They are essentially sound in doctrine; and that they are salutary in effect we make no doubt. Professor Lethaby's presence in the seat of judgment must surely have a sobering influence on any intending speaker or writer conscious of being "inebriated with the exuberance" of conventional verbosity—a lamentable condition for any man, and far be it from us to defend it; and if, as we suppose, Professor Lethaby's plea is for temperance rather than for teetotalism, we make haste to agree with him.

* * * *

At the meeting at which Professor Lethaby's speech was made, there was remarkable unanimity in accepting the principles set forth by Mr. A. R. Jemmett in his short paper on "Co-operation in Design." Mr. Jemmett pleaded for a real spirit of co-operation in design, and it was unanimously agreed that the fruits of this spirit are much richer than those of individualism; and he held that, generally speaking, architects do not get the best out of their assistants, because they do not call them into collaboration, but treat them too much as draughtsmen, or even as clerks, and too little as assistant designers. It would be difficult to say how far this generalisation is justified. One meets with about an equal number of instances for it and against it. Temperament, as the chairman of the meeting, Mr. A. W. S. Cross, very usefully observed, is of vital importance to effectual co-operation. "Can two walk together unless they be agreed?" But, as several speakers remarked, the old rampant individualism which formerly rendered co-operation almost impossible is now played out. It had no root in principle, because we are all members one of another, and any exaggerated assumption of independence will therefore suffer from the disadvantages that must always attend the violation of a fundamental law. Every man's work is, in a sense, a co-operative product, and frank recognition of the fact, with systematic cultivation of its effects, must surely be more prolific of good results than an assertion of egotism which opposes the process. Co-operation has always existed *de facto*, and the time has arrived for giving it the fullest possible recognition *de jure*.

* * * *

Necessarily we are all co-operators, but we seldom co-operate in quite the right way. We are apt to co-operate in an individualistic way, on a sort of mixed theory. There are no doubt still some offices in which the principal is a Great Panjandrum, unapproachable and domineering, and therefore consulted and assisted as little as possible by his subordinates, who soon grow weary of his grand manner, and of his practice of snubbing them severely when they venture to make suggestions which he afterwards adopts and claims as his own. But that type of architect is obsolescent. He is being rapidly superseded by the type of man who is perhaps too ready to lean heavily on his assistants, leaving them to work out in their own way the crude suggestions that he throws out casually and indeterminately. Between these extremes there is the type of principal who really collaborates with his assistants, and gives them due credit for their share in the work. By his geniality and generosity he develops the talent and generates the ideas that type the first would freeze out and type the second would reduce to lax perfunctoriness. No. 1 is lucky if he is not detested for a vampire; No. 2 if he is not despised as a weakling; No. 3 is loved and revered. His magnetic influence draws out of men the best that is in them: he has an astonishing knack of laying the foundations of successful careers; and in after years, with reputations made, his old pupils are proud to acknowledge him as their spiritual father. That is one most excellent form of co-operation.

* * * *

Another, almost equally prolific in happy consequences, is the ideal partnership. Mr. Cross said, only too truly, at the informal conference, that "it is extremely difficult to work really comfortably and profitably with a man you have never met before in your life, a man whose ideas may coincide with your own or be diametrically opposite." Of course, there are all shades of incompatibility, which therefore is not always and absolutely inhibitive. Some men who seem superficially to be of opposing types manage to pull together admirably, the one being, in fact, the complement of the other, each being more anxious to consult his colleague than to impose his own will on him. Of these, commonly one has an excess of the defects of the artistic temperament, the other being too practical-minded to do justice to the art side, and each having a wholesome respect for the other's special qualities. Mr. Cross's suggested remedy for incompatibility—not only between partners, but between architects and the other artists with whom they must frequently co-operate—is joint education "up to a certain point." That is a genuinely co-operative idea, and, if it could be put in practice, could hardly fail to promote a better understanding all round. It is very true that brothers, reared in the same nursery and educated in the same school, often make disputatious partners, but that is because they know each other too well, and presume upon their blood-relationship; and it remains possible to agree with Mr. Cross that early youth is the time for forming friendships. Fellow-pupils in office or school make the best partners. But, apart from these considerations of detail, it is no doubt a sound general conclusion—there was a consensus on it at the informal conference—that partnership is fruitful of good design, and that the homely proverb, "Two heads are better than one" is thoroughly vindicated in its application to architecture. Whether the principle can be profitably extended, and in what way, remain open questions, upon which we may hope to get considerable light at the further informal conference of the Institute on January 9, 1918, when the subject of debate is to be "Co-operation Amongst Architects, and Specialisation."

* * * * *

This co-operative idea has modified the national feeling about memorials. It is certain that in the immediate past, individualism was greatly overdone. It seems equally sure that the day of the Great Man is over. We have outgrown our habit of idol-worship and "the little tin god on wheels" is now an object of derision. If we continue the practice of putting a statesman, a preacher, a poet, a physician, a novelist, a painter, an actor, an architect, on a pedestal, we do it
merely because old customs die hard, and we
without the old wild enthusiasm. To-day, one o
of our admirals may achieve a victory that shall
the deeds of Nelson, but we shall not put his sta
so lofty a column. That tall column is typical
ridiculous heights to which our grandsires carrie
worship. Heroism, and all the other virtue
talents, are not so rare as the column seems to
It is seen that they are latent in the race, and
pretentious monument to a person through who
or other of these high qualities is expressed is
a monument to opportunity. Hence our memor
the outstanding heroes of the present war w
modest and simple. Great memorials will be re
for collective, or co-operative, or national heroisr

* * * *

Mr. Henry T. Hare's first presidential address,
we print on page 204, strikes us as being exactl
in tone and spirit. It faces the facts with the
calm confidence with which the nation is awaitin
issue of the war—is hopeful and reassuring w
being unduly optimistic. Upon most of the
with which it deals there was nothing new to be
but upon the most familiar of them all—national
ing—we get at last the official pronouncemen
which we have been eagerly waiting. It confir
hitherto unauthentic statements that the Local G
ment Board has had the wisdom to seek the aid
Institute in the great work of overtaking the la
able arrears in housing, that an adequate sum of
has been provided by the Government for se
architectural designs, that with this object a se
competitions is to be held, and that the Institute
the help of the allied societies, will endeavour to
that for every scheme a competent architect sh
employed. On the whole, this is the most grat
feature of a sufficiently statesmanlike address.

* * * *

Suspicion haunts the guilty mind. It is amus
read that the Germans, dreading the air-raid re
which they have provoked by their dastardly c
in bombing civilian populations in Britain, are
out the stained glass from Cologne Cathedral,
worse thing happen to it. This solicitude for an
so weak as glass is the first sign of grace that ha
observed in the Germans since the war revealed
as a people ruthless and barbaric beyond exagge
—the wanton destroyers of Louvain and Reim
brutal enemies of all that is noble and bea
Measuring us by their own vile standard, they
rally fear that our airmen may endeavour to d
Cologne Cathedral. It would be a thousand pi
in the course of the war, any serious accident
happen to the one building in Germany that is
preserving. Begun in 1248, it was not finishe
1880, when all the reigning princes of Germany
the opening ceremony a pompous pageant, whic
probably the real objective in completing the
dral; for one finds it impossible to credit the Hu
any motive pure of political or commercial inte
Germany had been constantly taunted with in
ence towards the cathedral, and its completio
intended partly as an answer to this charge, pa
a sop to religious interests that it was for the m
desirable to conciliate, and partly as an occasi
flaunting the solidarity of the brand-new G
Empire. Cologne had once the unsavoury repu
of being the most insanitary city of Europe.
poem on it, Coleridge records, "I counted tw
seventy stenches, all well-defined and several s
Greater than them all combined is the reek of th
reputation, than which nothing could be in
odour, but it will not induce our airmen to d
wantonly so venerable a relic of nobler days—an
nobler race—as Cologne Cathedral.

HERE AND THERE.

young architect has in him any latent literature,
e drawing-up of specifications is an incentive to
or a provocative. If he has any art in him,
ce with the board and squares will draw it out
one way or the other. In either case there is a
on from the humdrum, a reaction towards
m of expression and freehand delineation. Yet,
sage has said, "Many are called, but few get
3y most the call is heard but faintly. They turn
their beds and go on slumbering, perchance to
fitfully of what they might do if they had the
e. Few can rise to the occasion, as Thomas
did, as Mr. W. J. Locke did. It is safer, or
sy, to lie abed until, as Lamb puts it, the world
fortably warm, by which time it is usually too
the day to do more than barely meet the
ds of the bread-and-butter business; notwith-
ıg the hard saying that a man should not write
l until he is sixty. Nor does the Mistress Art,
y other art, easily tolerate rivals. They all
sly demand one's 'art-whole devotion, and it is
reason that the architect who develops a pretty
in perspectives is in no small danger of
ing a mere specialist in that kind—a beauty-
of other men's rough designs. Many artist-
cts have dodged this dull fate. Two of Mr.
Darbyshire's pupils, for example, got consider-
ame as humorous draughtsmen—that is, con-
y, not to say laboriously, humorous; the other
ıre neither famous nor scarce. Moyr-Smith
illuminate the pages of "Punch" with exqui-
graceful mock-classical designs; and W. C.
delighted a less fastidious public with his
y farcical and incomparably bold drawings of
ılly Sloper" menagerie, every one an exposition
summate skill in draughtsmanship, in which
I should rate him above Gillray and Rowland-
Nor can I share the view of those who hold that
at a talent was wasted on so vulgar a theme.
was the most popular artist of his day, not by
of his mastery of line, but because of the extra-
comicality of his subject; yet even in his
moments he never stooped to ugliness, graphic
ıographic.

*   *   *   *   *

as interesting to see, on the title-page of a five-
novel, issued last week by Messrs. Nisbet and
e name of Mr. H. B. Creswell, an architect the
tive style of whose occasional contributions to
urnal has enabled me to detect his hand in the
less, or rather differently, technical columns of
h." Curiosity was piqued. Would the author
eriously, or humoristically? Or could he blend
qualities, as Hardy does in one way, and Locke
ther? Having read the book, I am inclined to
it as a delightful farrago of jest and earnest—
he cement experts call a "rich mix." Now,
e humour is organic and spontaneous, and there
ittle of it to be had that one is bound to feel
ıl for any augmentation of the supply. Mr.
ell has given us, in "Thomas," a book that is
as philosophical as it is funny; wherein it per-
a function of true comedy—that of offering
satirical commentary on social foibles, solecisms,
of humanity or inhumanity. All the characters
ıomas" are deftly and firmly sketched. We
ll met Thomas Quinn, his freakish friend Bat
ı, the tabbyish Canon Tabb, the ingénue
, the flirtatious Little Nibbs, the entirely charm-
ta, and the rest—met them, not in fiction—for
e by no means stock characters—but in real life.
ilent Susan is a daisy. She is the motor that conveyed Thomas on the cunningly devised holiday tour which brought him the strange surprising adventures that form the staple of the narrative.

*   *   *   *   *

Susan has her idiosyncrasies, but she "gets there." "It adds pleasure to one's travelling to know that the excellent performance of one's car relies upon the application of a navvy's leather garter to the joint of a circulating pipe; and to be aware, when the engine fails in a particular way, that nothing is wanted but a new paper-fastener on the commutator lever. I once ran Susan sixty miles on a hairpin begged from a lady on a bicycle; and most of Susan's ills can be cured with a bootlace or an old nail." Every stage of the journey save one is marked by some fresh token of Susan's sweet responsiveness: the exception being when she very properly resented the indignity of having pebbles dropped into her tank to raise the level of her petrol. She thereupon grew sulky, and we love Susan all the more for this, the only intimation that she knew what was due to her self-respect. She will put up with a great deal, but she draws the line at pebbles in her petrol tank.

*   *   *   *   *

"Thomas" is as accommodating as Susan. Unless you are incurably methodical, you need not read its chapters consecutively. Each of them is a separate ecstasy. There is no real reason why the pages of any book should be read in the exact order in which they were written, the sequence being mostly a pure matter of chance. Southey knew this. If memory serves me, he began his "Doctor" with chapter viia. I should advise any architect to begin with chapter xii. of "Thomas," because it is about building, and the delicate handling of this dangerous subject will put the professional reader in a good humour with an author who is therein found manifestly sound in the faith and of orthodox doctrine. Cousin Jane was having a house built. She had ordered it from the Stores. "The drawings were inscribed: 'House for Lady Jane Waterbury. Design No. 2,721 of the Universal Stores, Ltd. Mr. William Wordsworth, Director of Sanitation, Architecture, and Building.'" You infer what happened owing to a typist's error in transscribing the number of the order? No? Or if yes, then you will want to see whether you have guessed aright the unhappy sequel. This curiosity will be well rewarded; for the chapter holds much matter for mirth. In that respect it is not singular among its fellows. In fact, one could almost wish that the author had been more sparing of his humour, his wit, his tangential escapes from the obvious. Not that the fun ever grows wearisome; but here and there the author gives us glimpses of a higher gift than that of an expert spinner of humorous yarns. If he would, he could write with tenderness and passion. Whether or not this is his first novel, I do not know. Certainly there is nothing in it that suggests the hand of the novice. I do most sincerely hope that it will not be his last, for it is a very jolly book—frivolous, but not without redemption; just the kind of book to beguile us awhile from the obsession of Armageddon. It is brimful of genuine humour of the sort that may be called organic or essential, in distinction from the much more common variety that is stucco over very inferior brickwork, and was machine-mixed in strict accordance with the standard specification and with the schedule of quantities attached "to same." Mr. Creswell's humour is spontaneous and of distinctive quality.

DIOGENES.

COLLEGE FARM, HINTLESHAM, SUFFOLK: A LINK WITH CARDINAL WOLSEY.

COLLEGE FARM, Hintlesham, the property of Sir Gerald Ryan, of Hintlesham Hall, possesses a curious and interesting history. Together with other lands in the neighbourhood it was held by the Priory (Benedictine nunnery) of Wykes, in the county of Essex, from the twelfth century. By deed dated December 10, 1525, a Royal grant was made to Cardinal Wolsey of the property of the Priory of Wykes aforesaid, for the foundation of Cardinal College (which subsequently became Christchurch College), Oxford, and the name of College Farm attached to that portion of the estates which has just changed hands. Also by deed dated June 26, 1528, the lands belonging to the Priory of St. Peter, Ipswich (including the Manor of Hintlesham, called the Priory Manor), were conveyed by Royal grant to Cardinal Wolsey, for the foundation of Wolsey's College, in Ipswich, which, of course, was never completed.

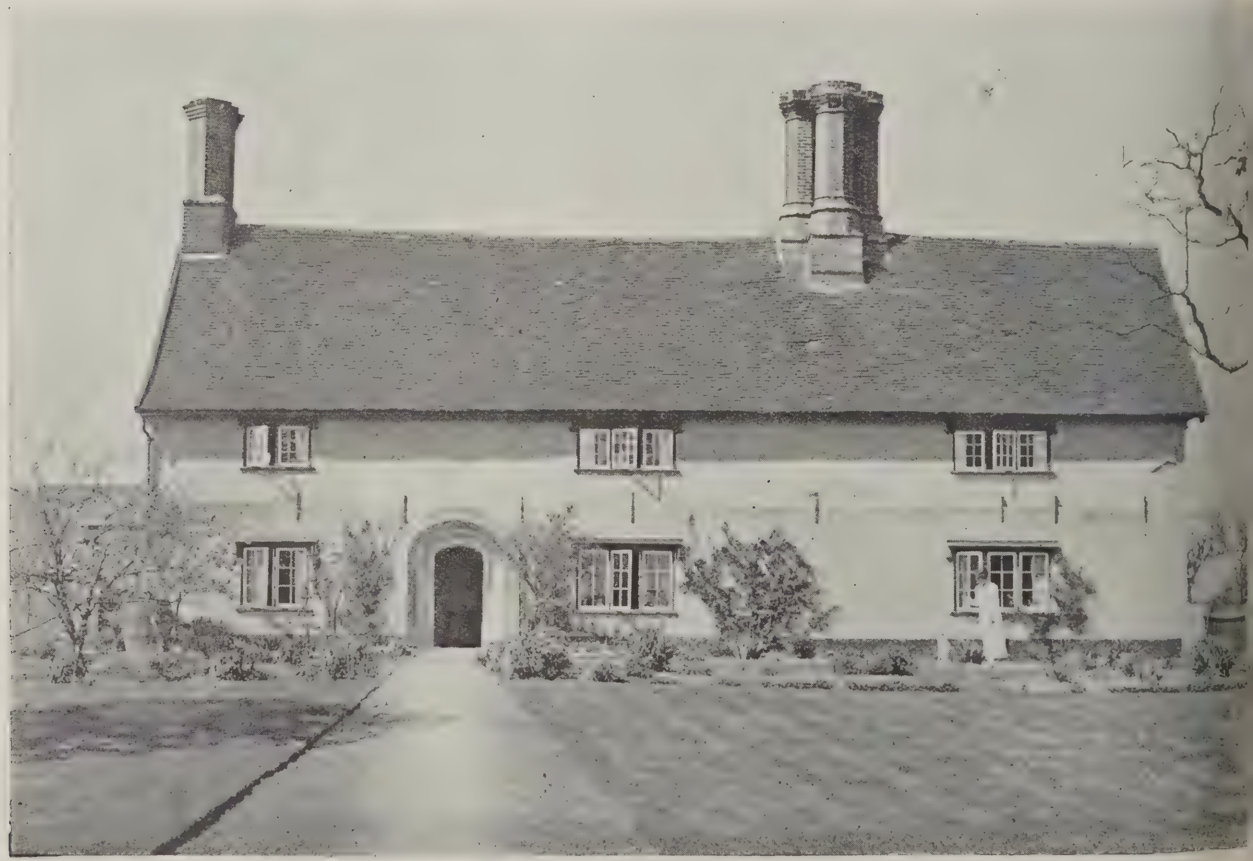
After Wolsey's fall, Henry VIII. granted to Eton College (by deed dated September 5, 1531) the lands in Hintlesham, Chattisham, Washbrook, and elsewhere in Suffolk that had passed into his hands by (1) the suppression of the Priory of St. Mary, Wykes; (2) the attainder of Cardinal Wolsey; (3) the dissolution of Cardinal College, Oxford; and (4) the dissolution of Cardinal College, Ipswich. This grant was in exchange for land surrendered by Eton College partly occupied by the Hospital of St. James's-in-the-Fields, and now forming the site of St. James's Palace. An old map of 1595 shows a field named Wyke's Field, and marks the site of College Farm and adjacent meadows, "Eaton College Lands."

From these remote times, College Farm remained in the possession of Eton College till December 2,
1800, when it was sold to Mr. Richard Savage L
under the Land Tax Acts and became part and p
of the Hintlesham Hall Estate.

The farmhouse possesses all the characteristics
early Tudor manor house. It is a half-timbered h
with over-hanging upper storey, and the roof is
mounted by a handsome grouped chimney stack.
porch is of charming and unusual design, a
partial restoration of judicious character has bro
to light the fine old oak beams that supported
structure. Inside, the house has been adapted
time to time to meet more modern requirements,
circular staircase of oak, radiated from an oak r
or central post, remains untouched and in exce
preservation.

But apart from the intrinsic attractiveness of
house and its surroundings, College Farm will re
chief claim to interest in supplying a link with the
—a link associated with the great name of Car
Wolsey. It is a fascinating piece of history that
small property should have entered into the fa
Cardinal's ambitious schemes for the advanceme
learning, and should have been set aside as part o
endowment for one of his colleges. And after
failure of these high schemes the exchange of t
Hintlesham fields for the ground on which St. Ja
Palace now stands is none the less noteworthy.

The above brief facts serve to connect this vi
with important movements on the great stag
national affairs four hundred years ago; and it is
haps worth while to recall that in the busy tow
Ipswich there is still jealously preserved "Wol
Gate"—a memorial of thwarted ambition.



COLLEGE FARM, HINTLESHAM, SUFFOLK.

THE PLATES.

The William Hall Walker Gymnasium.

IS building marks a departure from the usual gymnasium plan. Elliptical buildings are not common, and at first thought the usual rectangu- n naturally suggested itself to the architects. The ter of the site, however, determined the shape of lan. It will be inferred that the plan was ped on the premise that general athletics more iere gymnastics were to be encouraged, and con- itly a large part of the first floor is devoted to a e room, which, with the inclusion by means of g partitions of the exercise room and boxing gives a space one hundred and ten feet long twelve-foot ceiling, for baseball battery practice, ll formation work, jumping, and the like. The l or main gymnasium floor will be used for basket acrosse practice, putting the shot, pole vaulting, hile a special room is provided on the first floor xing and fencing. The running track is planned et in width, thus permitting the passing of run- necessary in competitive events, and also ing an ample gallery for spectators. The curva- s not a true ellipse, but is composed of arcs of struck from two centres. This affects consider- he cost of construction, as a continually varying requires more time and labour in laying out and ing the work. The track floor has the usual e contour, and is covered with cork carpet. To an abundance of daylight, the gymnasium floor nning track receive light from a forty-foot ating oval skylight, as well as from the track ws. The height of the gymnasium room to the side of the trusses will be 27 ft. 6 in., and to the the ridge 38 ft. The exterior consists of varie- deep-toned red bricks, with raked-out joints, the ngs being of limestone and terra-cotta. Our luctions are made by courtesy of the "American ect."

Architectural Ideas in War-Time.

The drawing which appeared in our issue for October 24 was the last of the set provided by our anonymous contributor, who has now consented to reveal his identity. The artist is Lieut. Stanley Hamp, A.R.I.B.A., who is serving with the anti-aircraft forces in this country. We are willing that this series of illustrations, so admirably inaugurated by Lieut. Hamp, should continue; and we cordially invite readers to send in designs for publication. In response to our earlier invitation, we received from a correspondent the drawing of which a reproduction is published in this issue. This building, a composition in the monumental manner, is intended to serve the purpose of a War Museum. In order to preserve the massiveness and solidity of effect which would seem to be required in a building of this type, windows have been omitted from the elevations; and consequently top lighting would be employed throughout. The building, it is suggested, should provide accommodation, not only for warlike records, weapons, and trophies, but also for an art gallery, a library, a music-room, and a hall for public meetings.

A Late Eighteenth-century Ceiling.

This is a portion of a ceiling from No. 15, Hanover Square, a house of the late eighteenth-century period, formerly the premises of the Royal Orthopædic Hospital. The original paintings, together with reproductions of the plasterwork, are now in the Victoria and Albert Museum, South Kensington.

Mantelpiece from Carrington House, Whitehall.

The mantelpiece, of which a detail is reproduced on the double-page plate in this issue, is of carved pine—a remarkably vigorous example of eighteenth-century craftsmanship. This chimneypiece is now in the Victoria and Albert Museum, Carrington House having been demolished several years ago.

Detail of Doorway.

Half-timber Gable and Chimneys.

COLLEGE FARM, HINTLESHAM, SUFFOLK.

THE R.I.B.A. PRESIDENTIAL ADDRESS.*

BY HENRY T. HARE, P.R.I.B.A.

FOR the fourth time our session opens under the shadow of the great war, and the conditions under which we exist as a profession have not varied from those in which our late President addressed us last year, except that there has been a material tightening up of the restrictions which limit, and indeed practically forbid, the exercise of our calling. We had hoped that we might have seen this chair still occupied by the same President, who has so ably conducted the affairs of the Institute since the beginning of the war, and who held all the threads of such activities as were permitted to us, and that he would have continued until he could hand over the office under peace conditions. This, however, was not to be; and we realised that there must be a limit beyond which endurance could not be strained. I am sure I am expressing the universal feeling amongst our members, and particularly those who are members of the Council, and therefore more intimately acquainted with the strenuous nature of the work which falls to the lot of the occupant of the President's chair, when I say that the Institute and the profession as a whole are deeply indebted to Mr. Newton for the manner in which he has throughout kept before him the single-minded view of pressing forward the interests of architects and architecture, and their claims to recognition. If we have not succeeded to the extent to which we should have desired, it has been entirely due to unfortunate prejudices and want of knowledge as to our real functions in many quarters, and amongst the public generally. These prejudices it must be one of our principal objects to remove by endeavouring to educate and interest the public, a task which is probably the work of a generation or two at least. We feel very strongly that had our special qualifications been properly understood, we should have been allowed and invited to serve the national needs in many directions where less qualified, or entirely unqualified, persons have been employed.

By far the most important event which has taken place during the past twelve months is the entry of United States into the war by our side, thus bringing together the two branches of the Anglo-Saxon race to fight for a common object. As architects we have exchanged most cordial greetings with our brother architects in America, many of whom we know well, and count amongst our personal friends. To any of these whom the exigencies of the war may bring over to this side we extend the hand of friendship, and invite them to make such use of this Institute as opportunity may allow them, and we assure them they will be more than welcome.

Although the regular exercise of our profession has been restricted, or practically non-existent, there have still been many grave and weighty questions with which we, as an Institute, have had to concern ourselves. Many of these questions still continue to exercise us, and there are many more before us which will demand most anxious and careful consideration.

Charing Cross Bridge.

In the last address from this chair, the President alluded to the Bill for strengthening and altering the Charing Cross Railway Bridge, which was then before Parliament, and to the prospect which seemed to be opening of sweeping away that unsightly structure and replacing it by a really fine road-bridge worthy of our magnificent river. The hope of this, which was shared by all who have the beauty of our great metropolis at heart, has unfortunately been indefinitely postponed. I am happy to say, however, that the opposition of the R.I.B.A. and the London Society has resulted in v important modifications in the Bill, which will ens that every opportunity is given to the authorities consider the possibilities of the greater scheme wh we advocate, before they are committed by la expenditure to the existing bridge and termi There seems to be a possibility that it may be reali in time that the bridge and terminus on this side of river must be hopelessly inadequate to the enormou increased traffic which will result after the war, that practical considerations alone may lead ultimat to the removal of the station to the other side. It however, to my mind a matter for regret that we, a nation, should allow our decisions to be made on pra cal grounds alone. The beauty of our city, with great river, should surely be a serious considerati and sufficient to rule out the existence of what is u and intolerable; and there are many ways in wh practical requirements can be complied with. It see really a pity that a bridge of any kind should be nec sary at this point of the river, as an unbroken sw between Westminster and Waterloo bridges wo give one of the finest and most impressive views to found in any capital of the world.

The Housing Problem.

Perhaps the most important question to us as arc tects which is now under the consideration of Government is that of the housing of the work classes after the war. We know only too well that conditions under which they live in most cases indeed deplorable, and any material amelioration seemed almost hopeless under the complicated con tions and restrictions which have fenced round problem. Impossible and unnecessary local bye-la have contended with the economic aspect, and result has been whole suburbs of dingy and squa streets of mean and depressing houses, utte demoralising to their inhabitants and conducing inefficiency and even crime. Happily it is now rec nised that the problem must be faced and solved some more satisfactory manner, and I am pleased say that the Local Government Board has approac the Institute, and invited our co-operation in secur the best possible plans for the houses which are to erected in large numbers immediately after the w They have placed at our disposal an adequate sum money for procuring these designs, and we have dra up a scheme for instituting a series of competiti throughout England and Wales. These are to be c ducted by the R.I.B.A. and its allied societies, w have entered into the scheme with great enthusia and there is every reason to believe that a very sa factory result may be arrived at. Many seri problems arise in the preparation of these desig Not only is it essential that the houses should healthy and comfortable, sufficiently segregat pleasant to look at and live outside of as well as and as varied in design as may be practicable, but th must take into account the necessity of the most ri economy, and the serious shortage of many build materials hitherto regarded as essential. The use the latter must be minimised, and substitutes desig and arranged for so far as may be possible.

Apart from the question of these competitions, Institute has a very strong committee sitting which considering how the interests of architects and, as firmly believe, the interests of the public as well m best be safeguarded in the carrying out of these ext sive schemes of housing. We believe that in ev scheme it will be in the best interests of the public, as of ourselves, that a competent architect should mployed, and that within reasonable limits he ld have a free hand, not only in the design of the es themselves, but in the general lay-out and vn planning" of the area to be dealt with from its ation. We shall do our best to ensure that this be regarded as an absolute essential, and I think ave a fair prospect of succeeding.

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* Delivered at the Opening General Meeting held on Monday, Nov. 5, 1917.

Architects and Air Raids.

view of the lamentable loss of life resulting from raids over London a sub-committee of the Archi- s' War Committee has formulated a scheme for the nination and registration of all properties within area of the London County Council which were ible or relatively safe as refuges for the public. was very carefully drawn up, and suggested the loyment of architects under the direction of the rict Surveyors, who would be the most competent ndertake such a work. After some trouble in find- out the proper authority, this scheme has been cated in general terms to Sir Edward Henry, and oly has been received saying that it is under con- ration. A small committee has also just been inted to investigate the effect of bombs falling on riking buildings, and valuable information will no ot be obtained as to the materials and methods of truction best calculated to resist the effect of high osives.

ne of the most valuable features of our constitution ir Allied Societies, not only in the United King- , but also in various parts of the Empire. Many ese have their representatives on our Council, and opinion and advice on the varied questions which from time to time are of the greatest value to the ests of the profession as a whole. Practice in the inces and dependencies differs in many respects that in the metropolis, and results in different s as to policy and many larger questions. With ew to reconciling any divergent views which may , it has been decided to hold a series of confer- s or conversations to deal specially with questions ting more particularly the Allied Societies, or on h they may have particular views. The first of e has been held here, and the second is to take e at Manchester on December 12, with others to w at different centres as may subsequently be ded. There is no doubt that these meetings will to produce harmony and unity of view, and will be beneficial.

The Informal Conferences.

e are proposing to continue our informal con- nces this session, and trust they may be as suc- ful and useful as hitherto. It has been felt by some we should resume our usual custom of regular onal papers, but after careful consideration we again decided that it will be best to continue our mal meetings. Eight of these have been arranged during the session, and very interesting subjects o be discussed. A full announcement of the dates subjects will be found in the Journal, and I trust nay have good attendances.

common with all similar societies, the war has put vere strain on our finances, and it has been neces- to exercise great care and economy in order to down non-essential expenditure. We have, as know, remitted the subscriptions of all members ing with the Forces—a constantly increasing num- and, in addition to this, we have felt it incumbent us to deal generously with many of our members se practice has ceased, or practically so. It may e future be necessary to curtail our expenditure further, and if this should invoke some small sure of sacrifice on the part of our members, I feel we may look forward to its being cheerfully sub- ed to.

In this connection I believe there are a few fortunate members of the profession who have actually benefited by the war in the erection and extension of factories and similar work. To these I should like to speak particularly, reminding them that we have a War Fund, which was established three years ago, and which is devoted to finding employment for architects who are in need or distress. This has been administered by the Architects' Benevolent Society, and has done very useful work, but unfortunately its coffers now need replenishing in order to enable them to continue. I have every confidence that those who are able to do so will support so deserving a fund.

After-the-War Problems.

Though we are still in the midst of a great war, and it is still impossible to see or foretell the end, and whether it may come soon or may be long deferred, it is very necessary that we should look forward and put our house in order so that we may be ready and prepared for the many serious problems which will confront us when the long-looked-for peace arrives, problems which will be entirely new, and in which we shall have no precedent to guide us. How is our profession to be reconstructed so that we may resume normal proceedings in a reasonably favourable condition? How are our men to be released from service in the Army? Are they to have preferential treatment as being the men whose work is urgently required as a first step to reconstituting the building trades? How and when is the present control of building to be relinquished? Is it to be gradual, or will the coming of peace automatically put an end to it? How is the serious shortage of many building materials to be dealt with, and how is essential and pressing work to obtain the preference? These and many other problems confront us, and with a view to being prepared the Architects' War Committee have established a committee which is now considering all these questions. I have also thought it wise to invite representatives of the Master Builders' Association, the Surveyors' Institution, and, I hope, the Civil Engineers, to join with the Council in a special conference on some of the same questions, and the first of the meetings will be held here on November 12. I think there is little doubt that such a conference will lead to very useful results.

It is very sad to think how many of our most promising young architects have fallen in this terrible war, many of them those whom we looked forward to seeing in the very forefront of our profession, a few of them who already had their feet firmly planted on the first steps of the ladder. One is almost tempted to think that Providence, in making the selection, chose the best, the very best. Though no mere words can in any way console their relatives for their loss, I am speaking on behalf of the entire Institute when I say that, in no mere perfunctory sense, they have our heartfelt sympathy. These men died for their country, and that country is immeasurably the poorer for their loss.

In conclusion, although the prospects for the moment do not appear hopeful, I trust this may be the last Presidential address which will be made under war conditions, and that when the next session opens we may be busily engaged in meeting the problems of reconstruction, some of which I have indicated.

I am sanguine enough to think that when this time of stress has passed, and peace once more returns to the world, there will be a period of unprecedented activity, and architecture will be afforded opportunities such as have not presented themselves for generations. Larger and broader views will be taken, and it will be our duty and endeavour to ensure that such enterprises as will commemorate this critical period of our history shall be judged by after generations as worthy memorials of the great events which led to their inception.

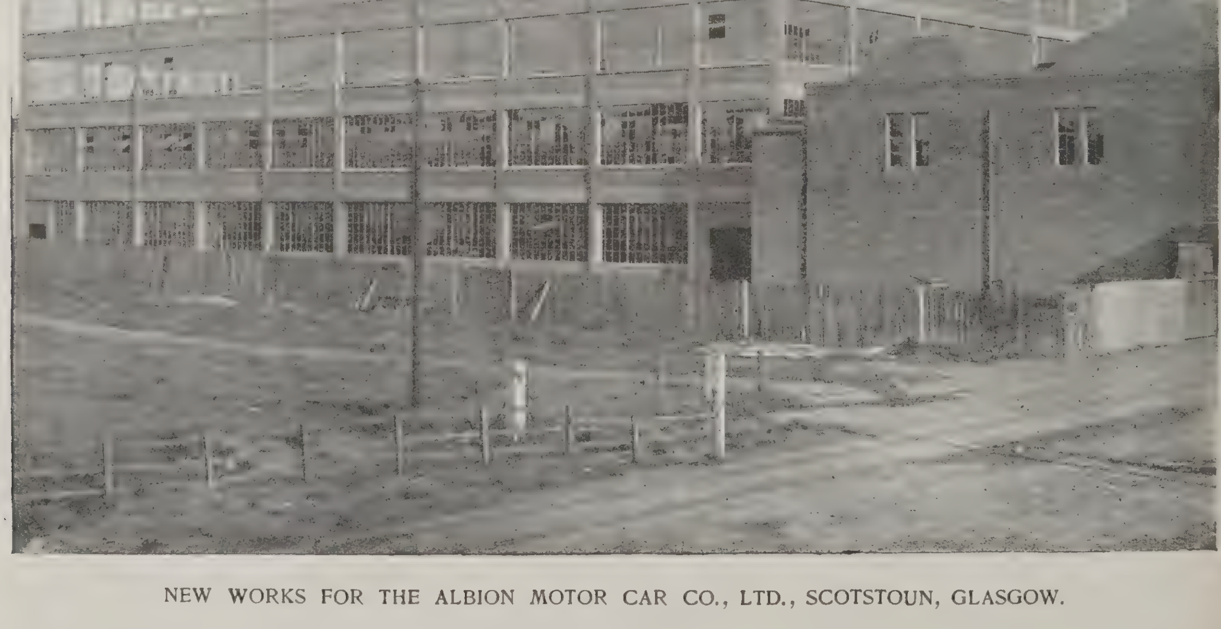
WAR·BVILDINGS·SECTION

MODERN MOTOR CAR WORKS.

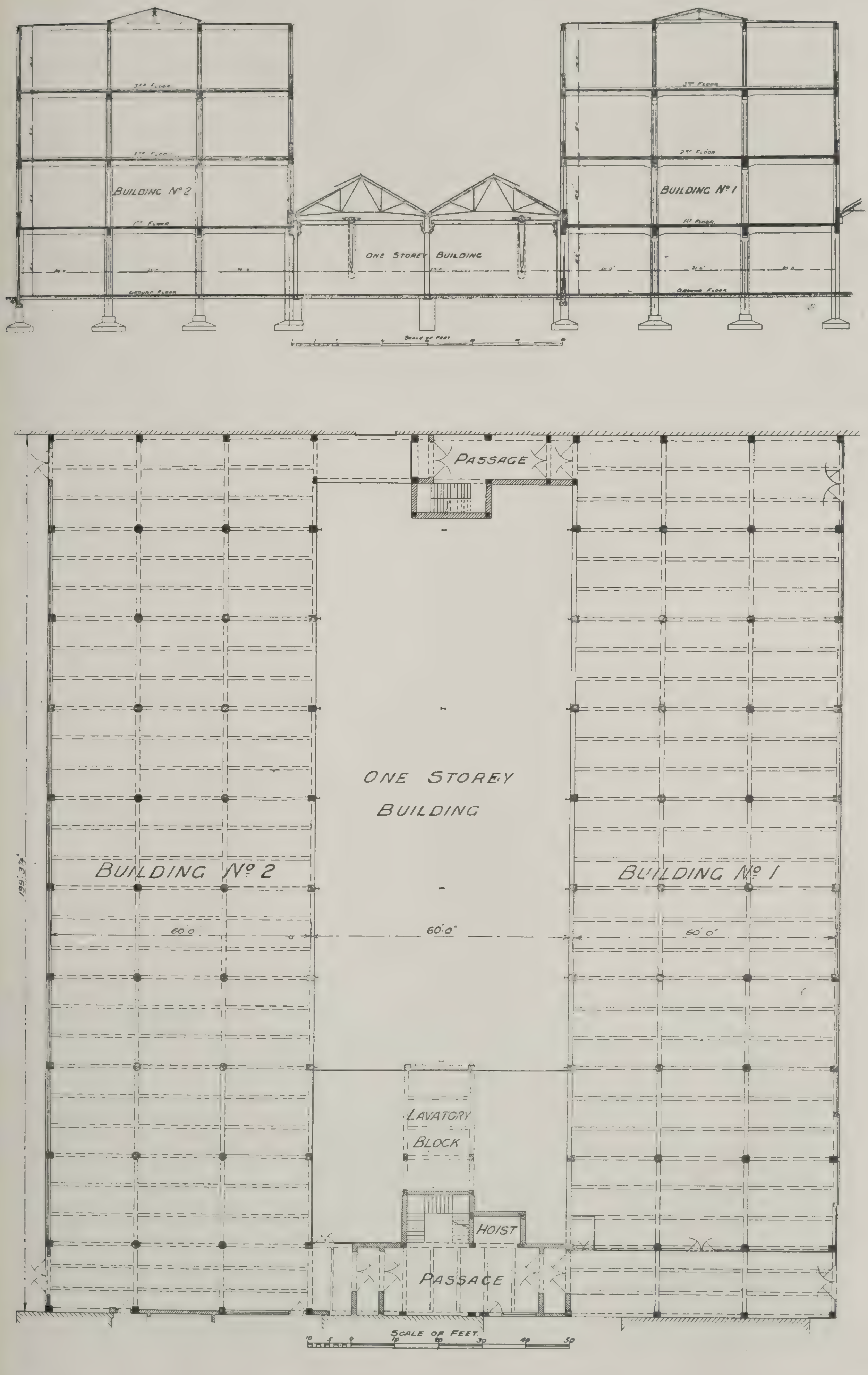
THE two buildings recently erected at Scotstoun, Glasgow, for Messrs. The Albion Motor Car Co., Ltd., are good examples of workshops and stores built in reinforced concrete.

The first block is about 200 ft. long, 60 ft. wide, and 60 ft. high, and consists of ground, first, second, and third floors and roof, the height from floor to floor being 15 ft. The first and second floors are used as stores, and were designed to carry a load of 3 cwt. per sq. foot. The third floor is used as a machine shop, and its construction is therefore lighter than that of those below it.

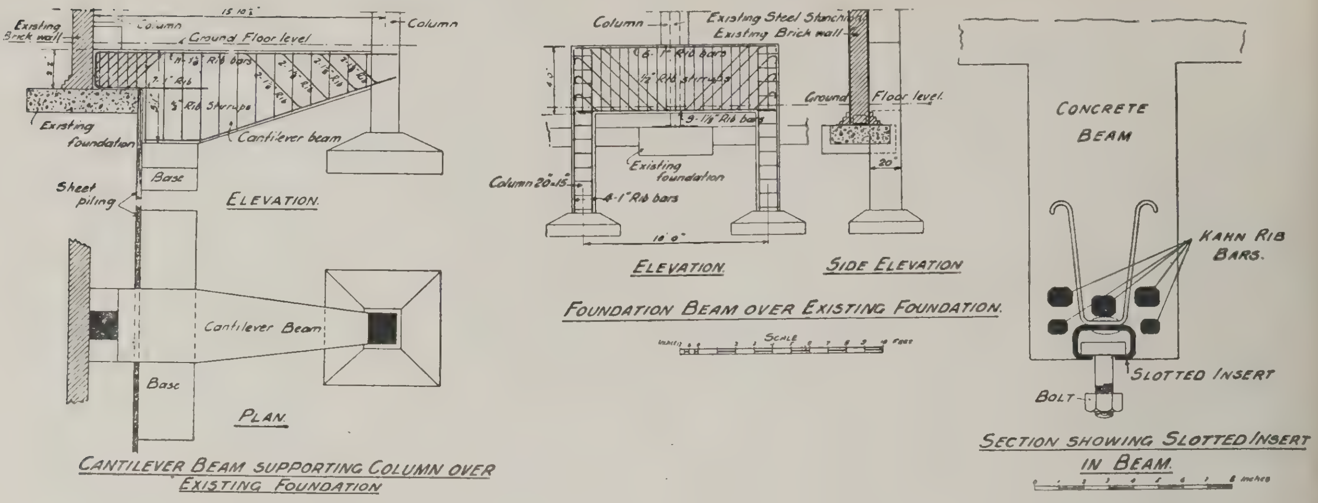
The second and newer building is 60 ft. away from the older one, the intervening space being roofed over to form a one-storey building. The site being near t River Clyde, it was found necessary carry the foundations of the columns do to a depth of from 6 ft. to 8 ft. below t ground floor level in order to reach stratum of boulder clay, which was es mated to withstand a pressure of three to per sq. ft. Most of the column bases, t sizes of which vary from 4 ft. to 7 ft. 6 i



NEW WORKS FOR THE ALBION MOTOR CAR CO., LTD., SCOTSTOUN, GLASGOW.



NEW WORKS FOR THE ALBION MOTOR CAR CO., LTD., SCOTSTOUN, GLASGOW: PLAN AND CROSS SECTION.



CANTILEVER BEAM SUPPORTING COLUMN OVER EXISTING FOUNDATION

FOUNDATION BEAM OVER EXISTING FOUNDATION.

SECTION SHOWING SLOTTED INSERT IN BEAM.

NEW WORKS FOR THE ALBION MOTOR CAR CO., LTD., SCOTSTOUN, GLASGOW: DETAILS OF CONSTRUCTION.

square, are of orthodox type, and call for no special comment, but where the new building adjoins existing ones at the north and south ends special bases had to be devised. The cantilever beam foundation shown in the figure above was adopted to avoid cutting through an existing concrete slab foundation of a brick wall, and also to prevent any extra load coming upon it. The wall being properly shored up, sheet piling was driven close to the existing foundation for a length somewhat longer than the new base, which is of oblong shape, to prevent the earth from falling away and letting the wall down when excavations were being made. After the base was cast a reinforced concrete cantilever beam was constructed, one end projecting 2 ft. 6 in. over the existing foundation to receive a column, and the other end being tied down to a side column.

In another instance, where a concrete column happened to coincide with a steel stanchion of an existing building, two bases were formed 5 ft. from either side of column; columns were then brought up from them sufficiently high to clear the foundation of the stanchion, and a reinforced concrete beam 4 ft. deep and 20 in. wide was placed across, from which the new column is supported.

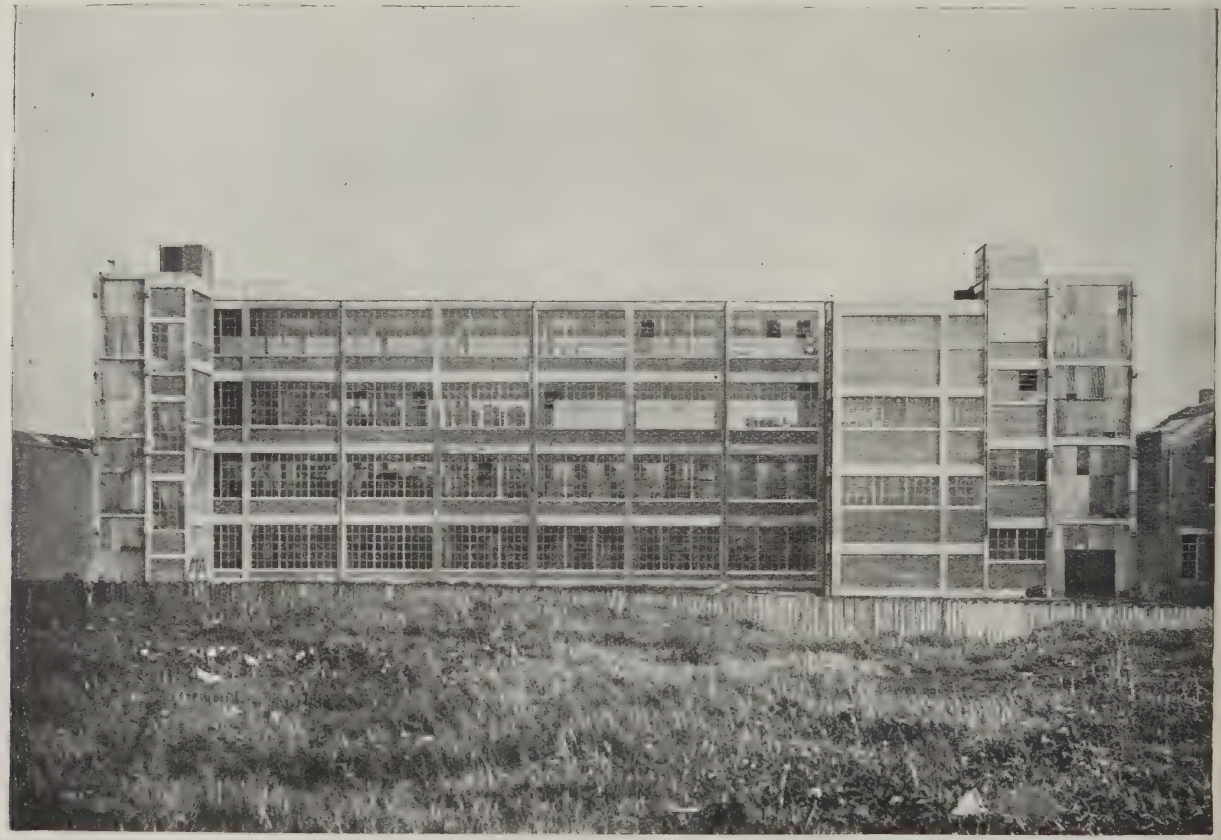
The ground and first floors are used as fitting shops and are paved with granolithic. The three lines of benches that run longitudinally are served by a corresponding number of overhead runways, which are carried from the secondary beams by short lengths of angles bolted to them through holes formed of iron barrel, which were cast in with the beams.

The second and third floors are used as machine shops, and are finished with $\frac{7}{8}$-in. maple floors secured to an under floor c $\frac{7}{8}$-in. creosoted deal, which in turn i secured to creosoted fillets at 15-ir centres, the spaces being filled in wit breeze concrete.

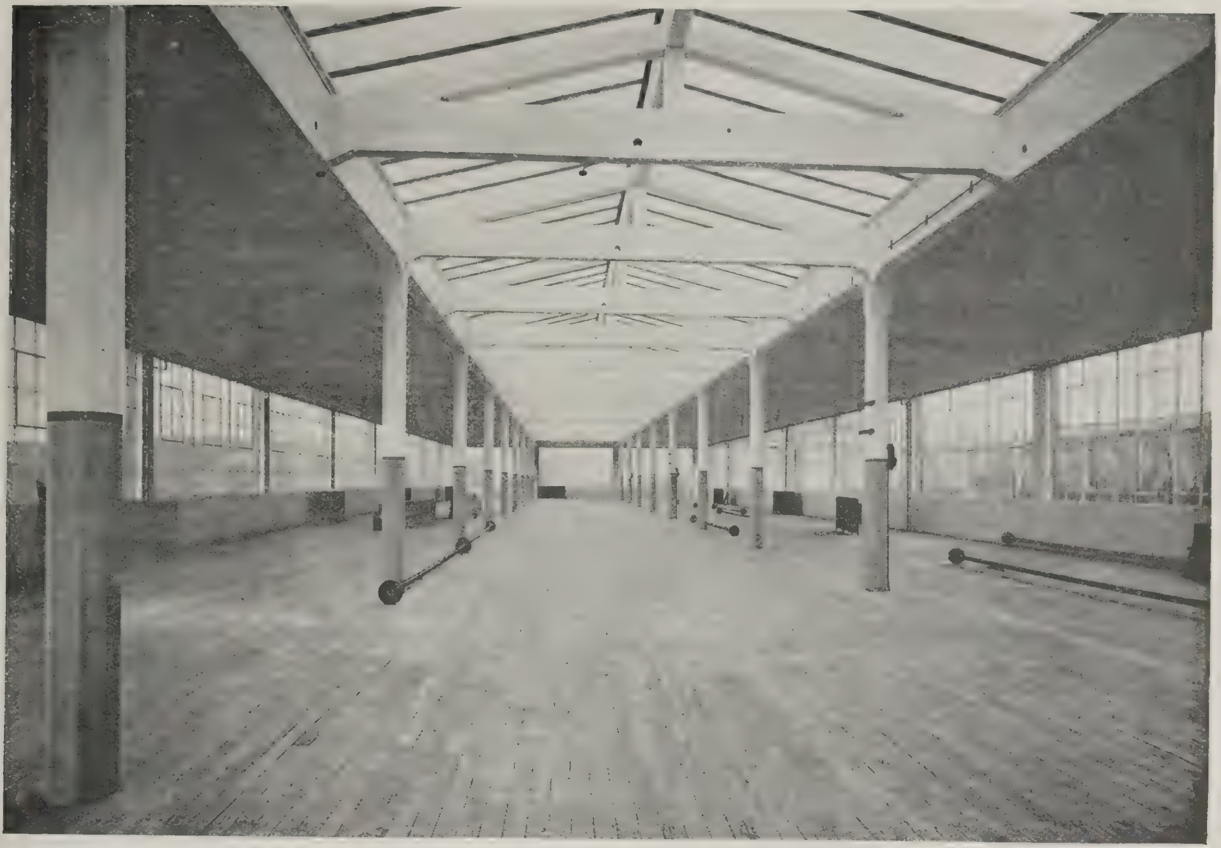
The shafting for machinery is hung fror the secondary beams—under the lanter light of roof it is hung from the undersid of trusses—in the following novel manner

Pressed steel-slotted inserts (show above) 3 ft. long and $2\frac{3}{8}$ in. wide, supplie by the Trussed Concrete Steel Co., Ltd. were cast in with the beams, so that th slots are flush with the underside of th beams, a proper hold to the concrete bein obtained by means of three bent strap riveted on to each insert.

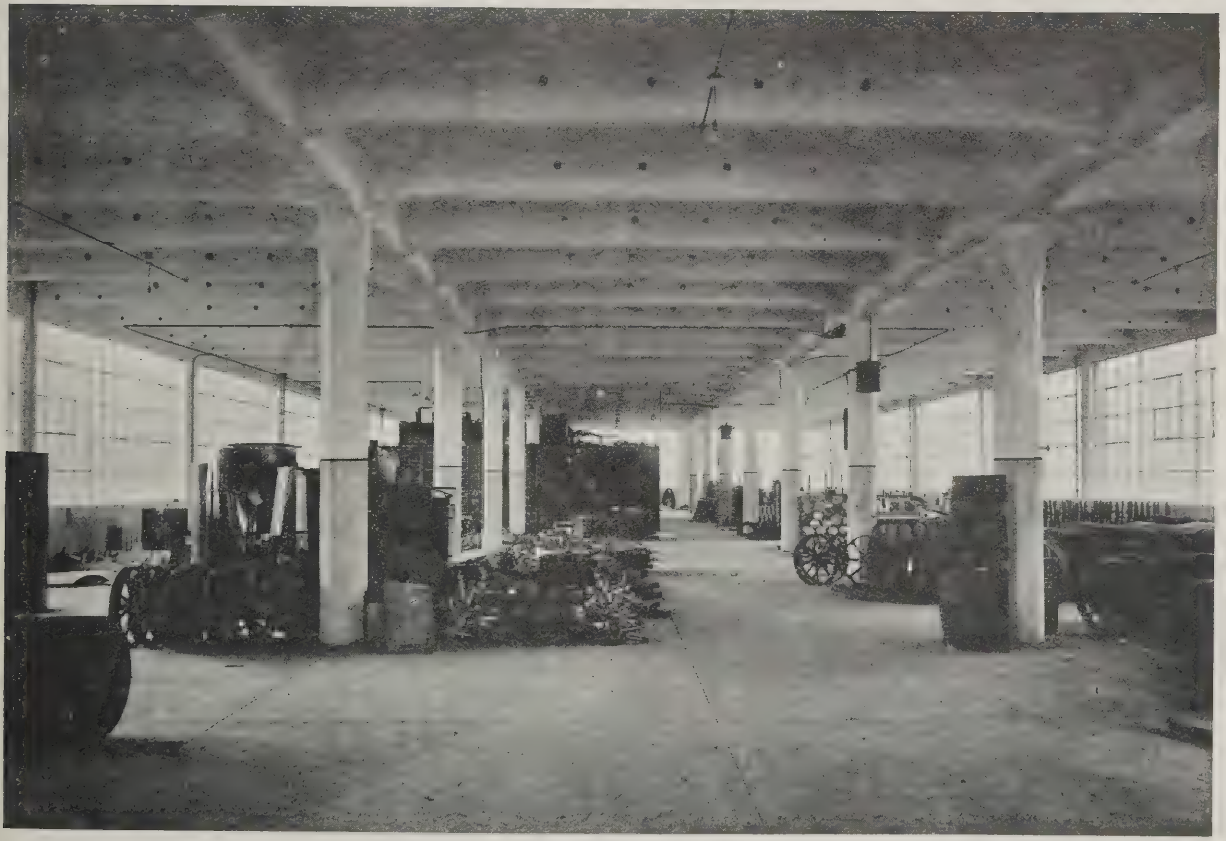
All the external walls are of 9-in brick 3 ft. high, built in between th columns and bonded into chases left in th columns for that purpose, and finished wit



NEW WORKS FOR THE ALBION MOTOR CAR CO., LTD., SCOTSTOUN, GLASGOW: REAR ELEVATION.



View in Tool-room (Third Floor).



View in Machine Shop.

NEW WORKS FOR THE ALBION MOTOR CAR CO., LTD., SCOTSTOUN, GLASGOW.

6-in. concrete sills cast *in situ*, the remainder of the openings being filled in with steel sashes 9 ft. 6 in. high, which give excellent lighting to the shops—a point which is of first-class importance in the design of workshops.

The whole of the reinforced concrete is executed on the Kahn system, and was designed by the Trussed Concrete Steel Co., Ltd., Caxton House, Westminster.

L. P. FRANCIS, M.C.I.

NEWS ITEMS.

Irish Shop Fittings.

In view of the extensive shop fitting which will be carried out in the near future in the city, the Council of the Dublin Industrial Dwellings Association has held a conference of building contractors and shop front fitters with the object of preventing the importation of shop fronts.

£30,000 *Loan Declined by Swansea.*

It is stated in the "Western Mail" that at a recent meeting of the Housing Committee of Swansea Corporation an offer from a London firm to advance, pending Local Government Board sanction, £30,000, to be expended on roads and sewers for workers' dwellings, was considered, but declined with thanks.

Air-raid Item.

Messrs. Waygood-Otis, Ltd., having very considerately placed their strongly built concrete building at the disposal of their unprotected neighbours during the night air raids, several hundreds of persons have taken advantage of the shelter thus afforded. Mr. and Mrs. Durling, the housekeepers, have been very courteous and helpful during these crises. Their neighbours, as an expression of their gratitude, have presented to Mr. Durling a small testimonial in the shape of a smoking cabinet, appropriately inscribed.

Cement Exports to Holland.

In the House of Commons on October 24 Mr. Leverton Harris (Secretary of Ministry of Blockade) said, in reply to General Croft, that the total exports of cement to Holland from all parts of the United Kingdom during August and September were 18,404 tons, all of which was consigned to the Netherlands Overseas Trust under guarantee against re-export. Latest Dutch official returns showed that during the first half of this year not only had there been no exports whatever of cement by Holland to either Germany or Belgium, but that during that time Holland had received from Germany about 90,000 tons. At the present time the export to Holland was prohibited, and no licences were now being issued.

The Flèche on Westminster Hall.

In the House of Commons on October 31 Sir A. Mond, replying to Mr. King, who asked whether he was aware that the *flèche* recently erected on the roof of Westminster Hall was considered by architectural authorities ill designed, said: The question of what course should be taken when the removal of the *flèche* erected by Sir John Soane in 1821 was necessitated owing to the repairs to the roof of Westminster Hall was submitted by my predecessor to the Ancient Monuments Board for England. In accordance with this Board's decision the present *flèche* was erected according to designs prepared in my Department. I know of no more competent architectural authority to advise on the treatment of ancient historical buildings. I am not aware that any competent architectural authority agrees with the statement made by the hon. member. The cost was £3,200.

Partnership Dissolved.

We are informed that the partnership which existed between Mr. F. C. Moscrop-Young, Licentiate R.I.B.A., M.S.A., and Mr. Ernest B. Glanfield, F.R.I.B.A., expired on October 31 and has been dissolved. Mr. Moscrop-Young will continue to practise at the same address. Mr. Glanfield will assume his practice on the conclusion of hostilities. Any correspondence addressed to 4, Clifford Street, Bond Street, W.1, will receive his attention.

Proposed Building Boards.

The Birkenhead branch council of the Property Owners' Association listened with great interest last week to a paper sent by Mr. George Snape on "A Scheme for the Better Housing of the Working Classes by the Establishment under Parliament of Building Boards Throughout the Country." The suggested boards, representative of all the experts concerned, and including women with knowledge of the domestic needs of the working classes, would advise the local authority on private enterprise or other building schemes worthy of Government loans.

THE R.I.B.A. RECORD OF HONOUR.

This, the forty-eighth list in the R.I.B.A. Record of Honour, is taken from the current issue of the Institute Journal:—

Fallen in the War.

Barker, Private Thomas Christopher, Yorks Regiment, member of the Scarborough Town Council (Licentiate). Accidentally killed at the front on August 4. Aged thirty-six.

Cowdell, Second-Lieutenant Charles Joseph Morton, Royal Engineers (Associate, 1912). Killed in action on September 12. Son of Mr. William M. Cowdell (F.), of Leicester.

Garratt, Edward (Licentiate, Pugin Student, 1905). Killed serving at his battery in Flanders on September 11.

Hill, Staff-Sergeant Claude Edgar, R.A.M.C. (Associate). Killed in action on September 3.

Moodie, Second-Lieutenant John (Student, 1908), Seaforth Highlanders. Died of wounds in France, August 27, 1917.

Second-Lieutenant Moodie received his architectural training principally at King's College, London, and, after experience in various offices, was assisting Mr. Alan Brace, of Old Buildings, Lincoln's Inn, when war broke out. In the spring of 1915 he joined the London Scottish, subsequently took the Cadets' course at Trinity College, Cambridge, and received a commission in the Seaforth Highlanders. After three months' active service in France (Somme district) in 1916 he was invalided home with trench fever, and later operated upon for appendicitis. Returning to France upon his recovery he took part in an action on August 22, 1917 (his thirtieth birthday), receiving two bullet wounds, from which he died in hospital five days later. He worthily upheld the honourable traditions of his family, and his strong, manly qualities, attached to an amiable disposition, cause his loss to be much plored by his friends.—Fredk. R. Hio (A.).

Members' Sons.

Dinwiddy, Major Conrad Hugh, Ro Garrison Artillery. Died of wour aged thirty-six. Fifth son of Thomas Dinwiddy (F.). Mr. D widdy has still three sons in Services — Commander Dinwid R.N., Major Malcolm Dinwid Royal West Kent Regiment, and Li tenant Norman Dinwiddy, R.N.V (F.).

Bath, Staff-Sergeant Leslie Vivian Hu R.F.A. Killed in action in France August 23. Youngest son of Mr. F Bath (F.), of Salisbury.

Military Honours.

Fisher, Captain Stanley Howe, R.E. has been mentioned three times despatches and has been awarded Military Cross.

Serving with the Forces.

Intimation has been received that following are serving, bringing the to to 77 Fellows, 532 Associates, 330 Lic tiates, and 298 Students:—

FELLOWS.

Healey, A. J.: Machine Gun Co Motors.

ASSOCIATES.

Black, Herbert: Australian Engineers.
Harrisson, J. A.: Canadian Engineers.
Mackenzie, H. B.: Second-Lieuten Royal Engineers.
Wade, F. W.: Second-Lieutenant, Ro Engineers.
Stretton, Clement: R.N.A.S.
Conder, A. R.: Second-Lieutenant, Equ ment Officer, R.F.C.

LICENTIATES.

Cheetham, H.: Royal Engineers.
Barbour, John, R.F.A.
Horne, D. E. A.: Lieutenant, Lab Corps.

Promotions.

Mr. F. C. S. Harrison (Student) has b gazetted second-lieutenant, Durham Li Infantry.

Mr. J. H. Chalkley (Student), late of London Regiment, has been gazet second-lieutenant, Machine Gun Corps.

Second-Lieutenant L. Sylvester Sulli (A.) transferred from the Royal W Surrey Regiment to the Labour Corps April last and is now acting-captain.

Mr. Harry R. Finn (Licentiate), w joined the Royal Engineers as a sapper July, 1916, was granted a commission second-lieutenant in January, 1917, was recently promoted to lieutenant.

Mr. Charles Woodward (A.), son of William Woodward (F.), has been gazet second-lieutenant, Army Service Corps

OBITUARY.

Mr. Oswald J. R. Olley.

We regret to announce the death, October 14, at the early age of thirty after a somewhat lingering painful illness, of Mr. Oswald J. Olley, who represented Messrs. Vulcan Ltd., for many years, calling upon arc tects on the east and south coast of E land and South Wales, amongst who and London architects also, he had ma friends, who will hear with regret of sad end.

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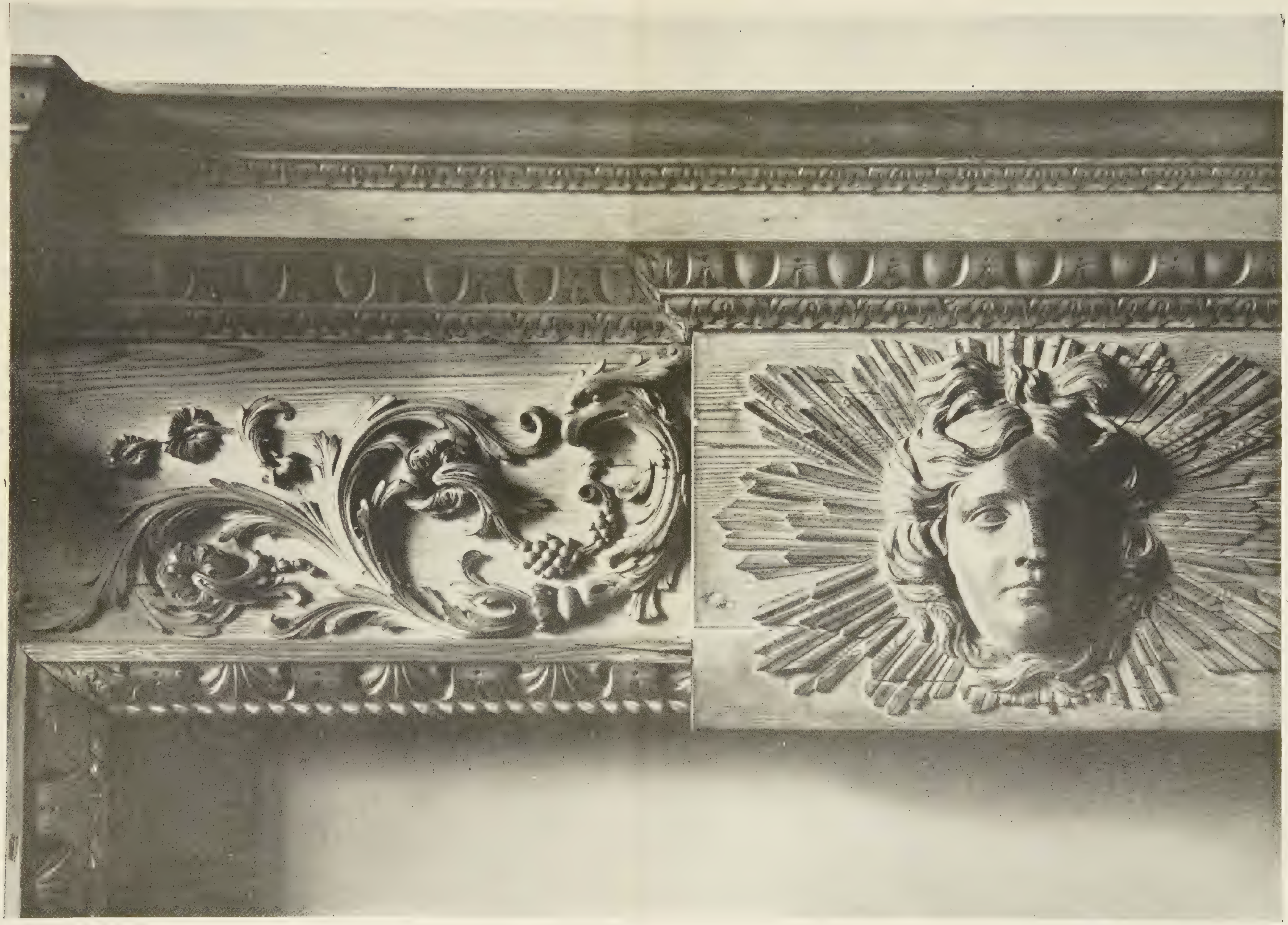
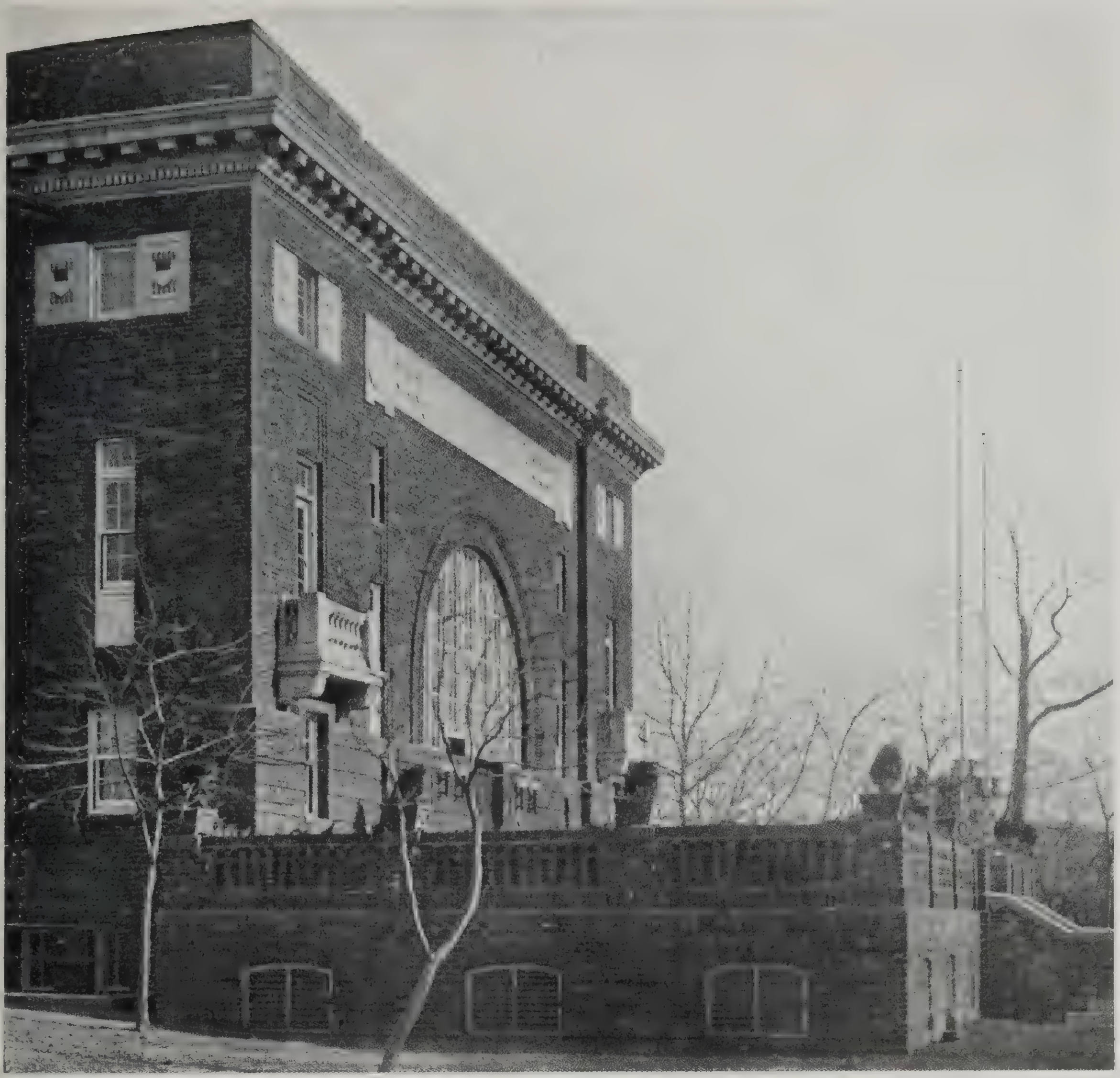
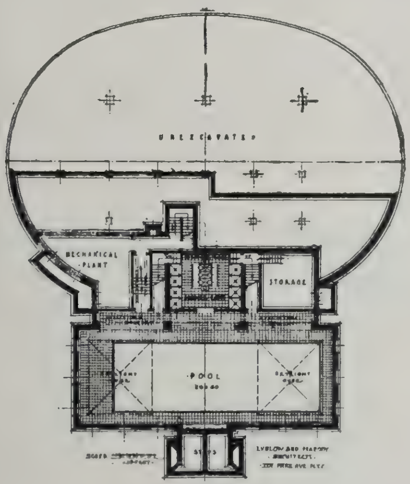


DETAILS OF CRAFTSMANSHIP (SERIES II.). XLVII.—DETAIL OF MANTELPIECE FROM CARRINGTON HOUSE, WHITEHALL, LONDON (NOW DEMOLISHED.)

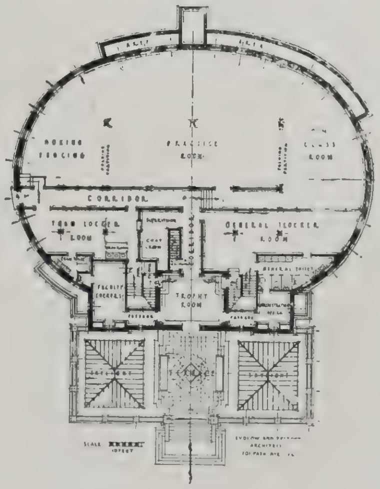
SIR WILLIAM CHAMBERS, ARCHITECT.



Principal Elevation.



Basement Plan.



Ground-floor Plan.

MODERN AMERICAN ARCHITECTURE (SERIES II.). XLV.—THE WILLIAM HALL WALKER GYMNASIUM, STEVENS INSTITUTE OF TECHNOLOGY, HOBOKEN, N.J.

LUDLOW AND PEABODY, ARCHITECTS.

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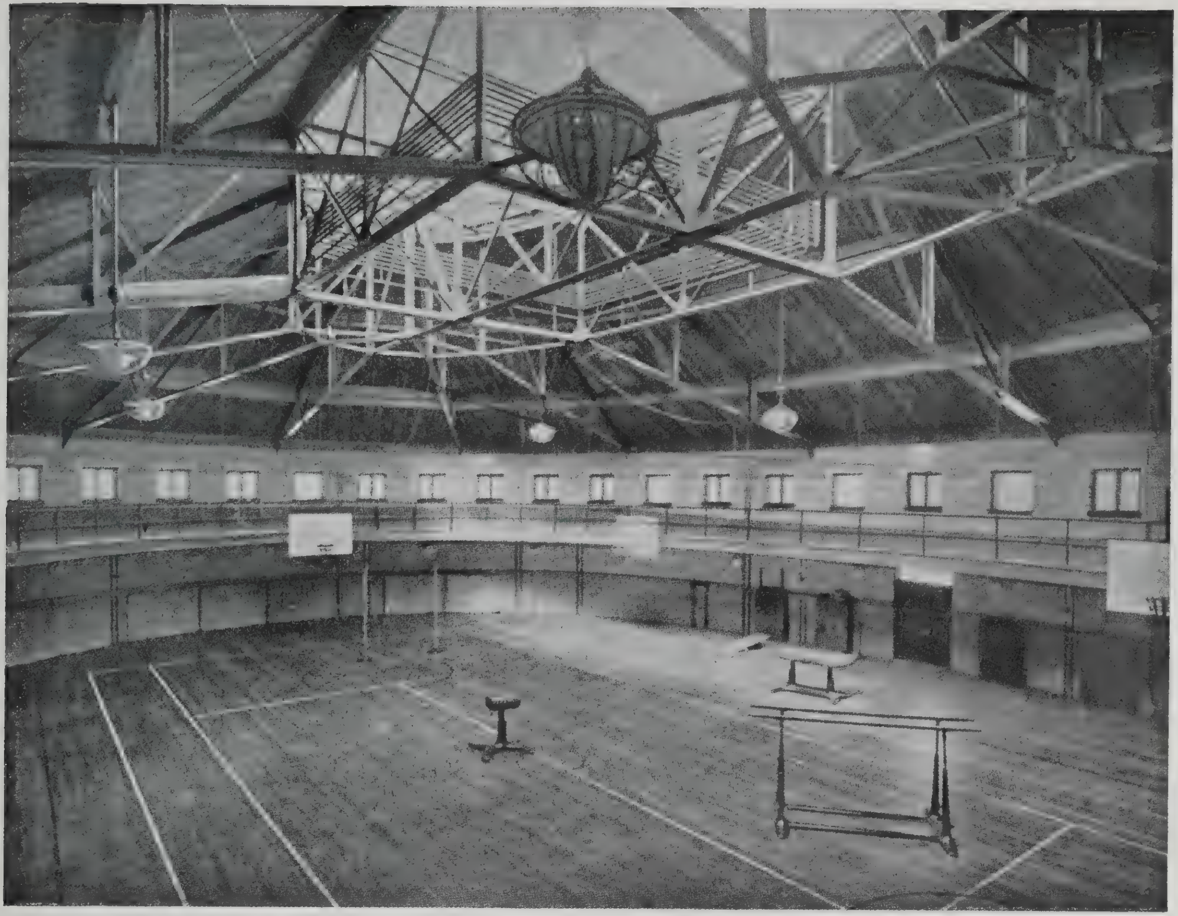
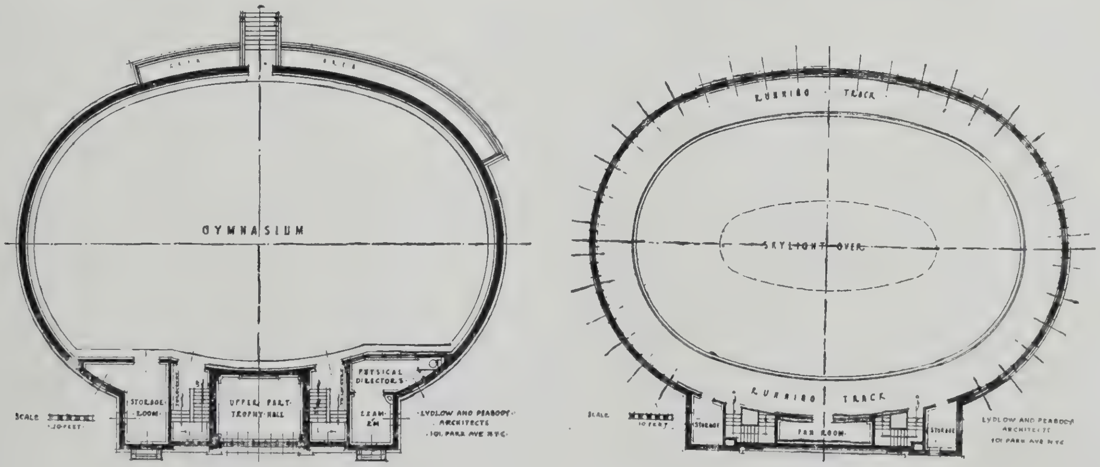


Interior of Gymnasium.



Plan of Gymnasium.

Plan of Running Track.

MODERN AMERICAN ARCHITECTURE (SERIES II.). XLVI.—THE WILLIAM HALL WALKER GYMNASIUM, STEVENS INSTITUTE OF TECHNOLOGY, HOBOKEN, N.J.

LUDLOW AND PEABODY, ARCHITECTS.

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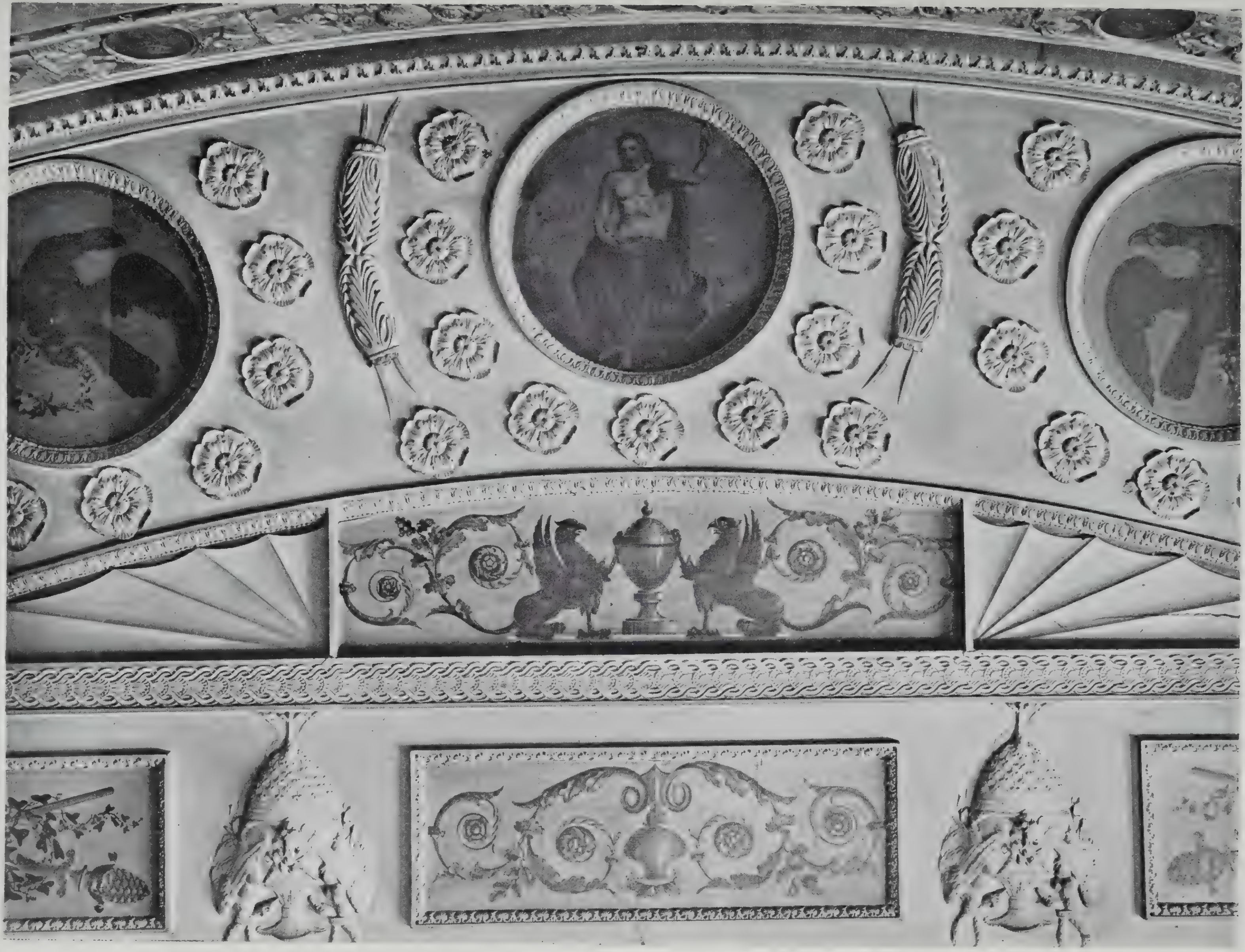

DETAILS OF CRAFTSMANSHIP (SERIES II.). XLVII.—DETAIL OF CEILING FROM No. 15, HANOVER SQUARE (FORMERLY THE ROYAL ORTHOPÆDIC HOSPITAL).

(Reproduced by courtesy of the Director of the Victoria and Albert Museum.)

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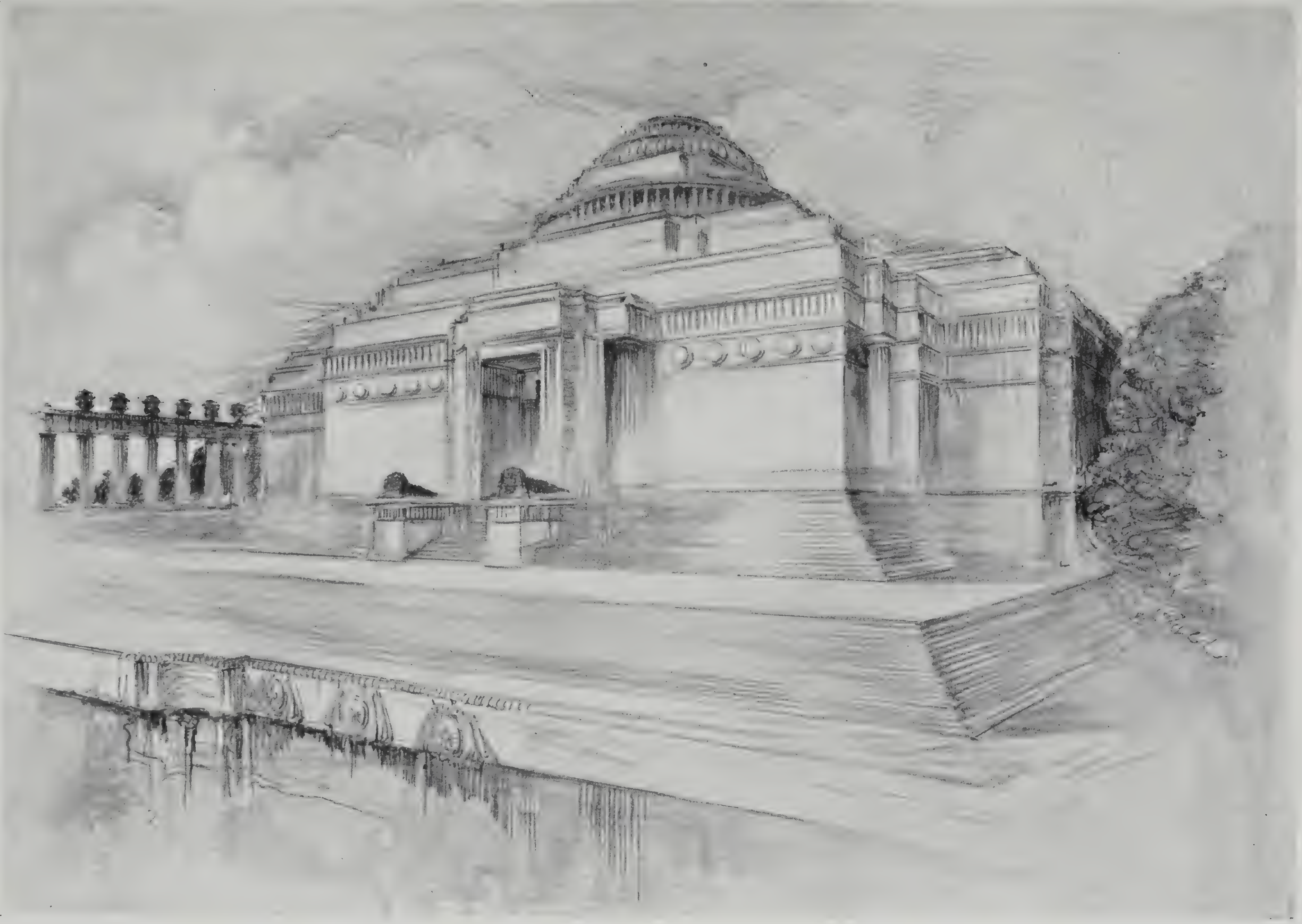

ARCHITECTURAL IDEAS.—X. BY W. H. H.

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THE ARCHITECTS' AND BUILDERS' JOURNAL.

NOVEMBER 14, 1917. TOTHILL STREET, WESTMINSTER. VOLUME 46. No. 1193.

IONAL HOUSING: R.I.B.A. COMPETITION ANNOUNCED.

we go to press, we are in receipt of a most rtant announcement by the Royal Institute of sh Architects, who invite designs for cottages r the Government housing scheme. Particulars iven on page 220.

NATIONAL PAPER ECONOMY.

ving to the very necessary Government restric- on paper supplies, all elements of waste must gorously excluded. Our readers, we are sure, gladly assist in promoting this object, which is em in national economy. They can co-operate us effectually in either of two ways—(1) By ng a direct subscription for this Journal, or (2) acing with a newsagent an order for its regular ery. Casual purchases—now here, now there— a serious discrepancy between supply and nd, and cause a wastage of effort and materials could obviously be reduced to a minimum but asual and erratic purchasing.

GHT on the housing question is gradually dispelling the mists and the gloom. One important point was made quite clear in Mr. Henry T. 's presidential address, which we printed last —that the Institute has been called into consulta- and is rendering active assistance of inestimable . Another was established by Mr. Hayes Fisher, dent of the Local Government Board, in his ss on "Housing at the Close of the War," ered last week at the Reform Club, Manchester— he State would not build. "There were," he said, nples of State Building at Woolwich and other s, and he would not like to see it tried on a grand because he did not think the State was a good er." He means, no doubt, not that the State does uild well, but that it does not build economically t it comes out badly on the financial side. So, for that matter, do municipalities, many of them g made a sublime mess of the business, especially they have adopted the "direct-labour" method. ly, the whole subject is being restated with admir- lucidity by Professor S. D. Adshead in a course lectures which he is delivering on Tuesdays at ersity College, Gower Street.

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fessor Adshead speaks with plenary knowledge, ie is not one of those who confuse fact with on. His data are punctiliously paraded in review he inspects them with a keenly critical eye, and reports upon them with calm and impartial nent. If he maintains this standard throughout, ll, at the close of the course, have cleared away difficulties that have hitherto perplexed the public We are glad to see that he entirely approves Government subsidy, and that he is not in favour al authorities undertaking the work of building. rience shows that municipalites do not build mically, and that the designs they produce or are almost invariably as dull and spiritless as an l document. He does justice to the corporation vor, whose opportunities and experience are often of great value with regard to purely practical details, but whose special training rather tends to disqualify him for dealing with what may be termed architectural subtleties. Hence the dulness, the unarchitectural character of his designs. Within the next few years there must be erected some three hundred thousand cottages, and unless they are invested with some sort of architectural merit they will disfigure the whole face of the country.

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A common-sense arrangement would be, as Professor Adshead suggests, for the corporation, always with the assistance of a competent architect, to buy the land, lay out the estate, construct the roads and sewers, and then entrust the building to whosoever seems best competent to perform it. Upon what terms it will be thus delegated is a question that at the present stage is necessarily left open, and it may be supposed that corporations will be allowed considerable freedom of method, but to what extent they may be able to delegate their authority and responsibility remains to be seen. Professor Adshead believes—and we quite agree in the opinion—that in many instances the work may be safely entrusted to private persons and to public utility societies, provided that in all such cases security is guaranteed through insurance. Professor Adshead's first lecture will be read with equal profit and pleasure, for it not only bears the stamp of authority, but rings sterling of sincerity.

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It is interesting to note what the civil engineers are doing, or propose to do, with respect to professional education. At a meeting held at their Institution premises, there was a vigorous discussion of the need for improved means and methods of training, and a resolution was passed for the appointment of a committee to arrange a scheme of central organisation. It was recognised that one great need is closer co-operation with other professions for mutual advantage, and it was suggested that a central bureau should be formed for the collection and distribution of accurate information upon all matters of professional interest, and for the provision of scholarships or other means of developing talent. Both these functions are sorely needed in all the professions. In the pre-war happy-go-lucky or catch-as-catch-can state of society in this country, there was a most wicked waste of force—wicked, because too often deliberately connived at from motives of self-interest, or family interest. It was very natural, no doubt, for the well-to-do to wish to keep the professions a close preserve for their relations, but this system, by restricting the volume of competition, kept the national standard of efficiency much lower than it need be. That it was grossly unjust in its penalisation of poverty is a moral consideration that can be conveniently ignored.

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On both sides of this question the arguments have been largely sophisticated with an exaggeration of self-interest. Clamour for "equal opportunities for all" has been but little better than nepotism in its motives, whatever it may have been in its effects. Masquerading as collectivism, it has been essentially an assertion of individual rights; and the whole quarrel has worn too much the air of class warfare, in which the interests of the nation as a whole have been thrust into obscurity. Possibly the antagonism between the haves and the have-nots is as ineradicable as any other form of disease, but, in the interests of the country, henceforth it must be subjected to rigorous control. We cannot afford to let the infection spread. We must, in particular, recognise and smash remorselessly as a specious fallacy the argument, heard less often now than it was in Mid-Victorian days, that talent needed no assistance—was, indeed, rather the worse for it—that, if it were worth anything, it would of its own native strength force its way to success—that "chill penury repressed their noble worth" was mere sickly sentimentality. Much the same sort of argument has been used with regard to sanitation and other measures for the prevention of actual disease, which, according to the inhumanitarians, is a very useful means of weeding out the weaklings, and of promoting the survival of the fittest—cant phrases that one has learned to loathe for the brutality and ignorance with which they have been commonly applied. By judicious treatment the weak become strong. A little timely encouragement and assistance will develop talent that otherwise would never have been exercised, or will divert it into profitable channels. Talent does not necessarily imply a capacity for getting on, and for every able youth endowed with "pushfulness" there are a thousand who, lacking this quality, are debarred from rendering their country the highest degree of service of which they are capable. We are wasting an enormous amount of raw material because we will not take the trouble to convert it, or perhaps because we are ignorant of the processes of conversion. It is not at all a question of helping a youth to "get on." It is a question of making him a better citizen, a more profitable servant to the State, and we must at once get rid of all obstacles to this consummation.

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At the Civil Engineers' meeting, Professor W. E. Dalby, of the Imperial College of Science, mentioned that ten years ago, when he was in Germany, he found that the number of men soundly educated and trained in engineering was more than ten times that in England. This obviously cannot be a matter of precise ascertainment; but there is no doubt that it is roundly true, and it indicates a grave defect in our national polity. Current events give it a tenfold significance that is not altogether adverse to our hopes; for though the outbreak of the war found us as deficient in the supply of skilled labour as Professor Dalby's comparative estimate would seem to imply, it is a matter of history how rapidly and thoroughly this difficulty was overcome. Men and women who had never seen a machine tool were in a few months trained to a useful degree of proficiency, and their intelligent responsiveness puts it beyond doubt that there was latent a vast amount of mechanical aptitude that had been foolishly allowed to run to waste, perhaps because its existence was unsuspected, but more probably because systematic means of developing it had not been devised, and because less arduous or better understood means of earning a living had offered superior attractions. Technical education should henceforward become a matter of course rather than an esoteric mystery of which the secrets are imparted reluctantly to a chosen few, who expect high reward for submitting themselves to the ordeal. Men should be persuaded to seek it for its own sake, for the satisfaction that attends efficiency, rather than in the hope of individual advancement. Here, again, is seen the necessity for cultivating co-operative or collective ideals. These terms have been much abused, and are commonly perverted to a partisan sense. What we mean by them is that employers and workmen should alike try more earnestly to look beyond immediate personal interest—to grasp the idea of working together for the general good, in the assurance that the best guarantee of individual prosperity is the expansion
of national industry, and that excess of indi
selfishness tends to defeat this object.

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Workmen avoid academic teaching for s
reasons that are only too cogent. (1) They have
expected to undergo it after a day's work. (2)
are painfully and bashfully aware of the great
between technology and the indifferent eleme
education which they have received. (3) They "
see what good it is going to do them." (4) Its t
and practice do not square with ordinary wor
conditions. (1) and (2) are in the hands of the Mi
of Education. (3) hits a vital defect in indu
organisation, whereby the highly efficient wor
has no better prospect than the inefficient, save
twenty-to-one chance of becoming some sort of a
man—a chance so remote that it is not worth con
ing. This blind-alley or mill-horse-round drudg
a potent cause of "labour unrest." (4) Than
munition requirements, workshops have been tun
to something like the right pitch, and must never
be allowed to flatten on it.

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It is gratifying to note that our public schoo
arranging for memorials to their old *alumni* who
served their country in the great war, are showin
regard for art and science. Mill Hill School i
latest case in point. Here it has been resolved
the memorials shall comprise: (1) A fund to provi
the education of the sons of Old Millhillians who
been killed or permanently disabled; (2) the ere
in some part of the school of a suitable monume
artistic beauty; (3) the extension of facilitie
science teaching in the form of a building which
contain laboratories and lecture-rooms. It
exemplary trade. With its irresistible thre
appeal to humanity, amenity, and practicality,
truly representative of the public school as a
cosmos, definitely associated with every h
interest; and, moreover, the project of a science
ing is a clear recognition of the direction in
modern education is bound to travel, whether w
without detriment to the classical side.

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Mr. Henry T. Hare's presidential address,
we printed last week, dealt with an aspect o
housing question which has hitherto received
little attention. Usually it has been
assumed that the 300,000 houses that are to
into being with the aid of the Government w
built of the ordinary materials. Mr. Hare,
ever, suggests that the newer and lighter mate
of construction may possibly be employed to
vantage. It will be remembered that, some
years ago, a departmental committee ma
similar recommendation with respect to s
buildings. In support of this proposition
argued, reasonably enough, that longevity in
buildings is neither necessary nor desirable,
that, indeed, we are suffering somewhat ac
from an embarrassing survival of ugly cottages
out-of-date schools. These were put up when
was hardly any alternative to bricks and mo
To-day there is no lack of lighter materials, w
while ensuring sound construction and co
appearance, do not pretend to a durability
may certainly be regarded as excessive when it
lasts a ninety-nine-years' lease or obstructs e
tional reform. Evidently these lighter materia
construction are insufficiently known, and
manufacturers would act wisely in seizing the psy
logical moment to give them further publicity. It
excellent opportunity for the alert man of busine
take occasion by the hand.

HERE AND THERE.

OW my Uncle Toby would stare and gasp at the innovations in Flanders, where he saw service and got his mysterious wound, about which the w Wadman showed so much tender solicitude. t on fortification, he would have been vastly ested in the Hun device of pill-boxes. Bastions avelins and redoubts he might have tolerated, no r what fantastic forms they took; but pill-boxes ir too much of Dr. Slop. If I read the news t, these new pill-boxes are of cast-iron. Probably nly advantage they offer as compared with the ete pill-box is that metal hardens more quickly cement. 'Tis no matter for that, quoth my Uncle . Our modern engines of offence will make short of them. When the walls of the baronial castle built some forty feet thick it was in vain to propel cannon-balls at them; but cast-iron cannon-balls erred the advantage to the attacking force, with it must always remain, save for the short inter- luring which the aggressive engineer is thinking ome effective repartee. For these pill-boxes our rists have already compounded, no doubt, an ding bitter pill, "with draught to follow": to wit ual draft of German Kameraden.

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ese pill-boxes may be considered, I suppose, as in miniature martello towers, like those which were ng allowed to disfigure certain sections of our because of the difficulty of destroying them, even heavy artillery was trained against them at close ers. It is said that they were put up owing to the ness of a small round tower at Mortella (not llo) Point, in Corsica, which, in 1794, withstood e cannonade by an English fleet commanded by Hood. If, as a not incredible rumour has it, the itants of German towns are panic-stricken at our ened reprisals for their dastardly air-raids, they amour for home supplies of pill-box funk-holes, ey will not get them, the All-highest having no and less sympathy to spare. Imagine the air- l world of the future, all its buildings designed in rm of a sharply sloping cone, so that a direct hit bove would be very difficult, while a bomb hitting ljacent ground would waste its sweetness on the air; for it could hardly drive in the walls of a ithic cone. Could this comical conical refuge be beautiful? I have seen oast-houses and bottle- d kilns that were not uncomely. And the shape be no innovation, for is it not that of the wig- . If it be objected that this would be reverting to ly barbaric type, a cynic might retort: so is man- s misrepresented Teutonically.

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for the invention of high explosives, aviation leave the housing question untouched, and be little worse than a delightful sport. Small r that the earliest chemists were commonly yed as agents of the powers of darkness! Roger , erroneously supposed to have been the inventor ipowder, narrowly missed this fate. If he had en banished from Oxford to Paris, he might have Oxford a long lead in physical science; for he here those "sublimations, fixations, calcinations, ns, distillations, and congelations," which got e reward of prosecution as a magician. His sed invention of gunpowder is based on a misin- ted passage in one of his works; and even in his villainous saltpetre" was only too well known to abs. In his treatise on perspective, he at least sts the invention of the telescope; and in his Majus he predicts a diabolical use of the burning- –"in time to come," he says, "the devil will by eans set fire to towns, villages," etc. In the old comedy of "The Honourable History of Friar Bacon and Friar Bungay," by Robert Greene, Shakespeare's traducer, the same that bought a groat's-worth of wit with a million of repentance, Friar Bacon made a brazen head, which, when put under powerful spells and made to speak, was to instruct him how to girdle England with an impenetrable wall of brass. Of course the scheme miscarried, all the technical instruction that the head imparted being, "Time is. Time was. Time is past." Even if Bacon, like Balbus, had "built the wall," it would have been denounced by Free Traders as an aggravated form of Protection; and that it would not have kept out enemy aviators may be inferred from the experience of the Wise Men of Gotham, who fenced a field to prevent the escape of a bird. What a foolish old world it was! But is it much wiser to-day? It is vastly more scientific; but to what paradoxical uses it puts its science, the blue-clad hospital patients could testify. "Knowledge comes, but wisdom lingers."

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Roger Bacon's scientific forecasts are paltry when compared with Leonardo's; and I am surprised that the incomparable Leonardo's famous bragging letter, written to Ludovico il Moro, Duke of Milan, in 1483, when Leonardo was but little more than thirty years old, is not more often quoted with reference to current events. I venture to give it in full:—

"Most Illustrious Signor,—Having seen and sufficiently considered the works of all those who repute themselves to be masters and inventors of instruments for war, and found that the form and operation of these works are in no way different from those in common use, I permit myself, without seeking to detract from the merit of any other, to make known to your Excellency the secrets I have discovered, at the same time offering, with fitting opportunity, and at your good pleasure, to perform all those things which, for the present, I will but briefly note below.

"1. I have a method of constructing very light and portable bridges, to be used in pursuit of, or retreat from, the enemy, with others of a stronger sort, proof against fire or force, and easy to fix or remove. I have also means for burning and destroying those of the enemy.

"2. For the service of sieges, I am prepared to remove the water from the ditches, and to make an infinite variety of fascines, scaling-ladders, etc., with engines of other kinds proper to the purposes of a siege.

"3. If the height of the defences or the strength of the position should be such that the place cannot be effectually bombarded, I have other means whereby any fortress may be destroyed, provided it be not founded on stone.

"4. I have also the most convenient and portable bombs, proper for throwing showers of small missiles, and with the smoke thereof causing great terror to the enemy, to his imminent loss and confusion.

"5. By means of excavations made without noise, and forming tortuous and narrow ways, I have means of reaching any given [point?], even though it be necessary to pass beneath ditches or under a river.

"6. I can also construct covered waggons, secure and indestructible, which, entering among the enemy, will break the strongest bodies of men; and behind these the infantry can follow in safety and without impediment.

"7. I can, if needful, also make bombs, mortars, and field-pieces of beautiful and useful shape, entirely different from those in common use.

"8. Where the use of bombs is not practicable, I can make crossbows, mangonels, balistæ, and other machines of extraordinary efficiency, and quite out of the common way. In fine, as the circumstances of the case shall demand, I can prepare engines of offence for all purposes.

"9. In case of the conflict having to be maintained at sea, I have methods for making numerous instruments, offensive and defensive, with vessels that shall resist the force of the most powerful bombs. I can also make powders or vapours for the offence of the enemy.

"10. In time of peace, I believe that I could equal any other, as regards works of architecture. I can prepare designs for buildings, whether public or private, and also conduct water from one place to another.

"Furthermore, I can execute works in sculpture, marble, bronze, or terra-cotta. In painting also I can do what may be done, as well as any other, be he who he may.

"I can likewise undertake the execution of the bronze horse, which is a monument that will be to the perpetual glory and immortal honour of my lord your father of happy memory, and of the illustrious house of Sforza.

"And if any of the above-mentioned things shall seem to any man to be impossible and impracticable, I am perfectly ready to make trial of them in your Excellency's park, or in whatever other place you shall be pleased to command, commending myself to you with all possible humility."

Your Excellency's to command in the science of war or the arts of peace! I make no question about the ability of this omniscient anticipator of "tanks"; but I fear that the humility is a polite fiction. DIOGENES.

THE PLATES.

Prudential Assurance Buildings, Leicester.

THIS façade is the Hotel Street frontage of a large block of buildings erected for the Prudential Assurance Co. at Leicester, from the designs of Mr. Paul Waterhouse, M.A., F.R.I.B.A. The buildings have another elevation in Grey Friars, which, however, consists of a combination of brick and stone. The company's offices are entered from the central doorway here shown, which also gives access to a staircase on the right, leading up to one of the tenancies on the first floor and downwards to a large billiard saloon. The general tenants' entrance is in Grey Friars. The contractors were Messrs. W. Corah and Son, of Loughborough. A photograph of these buildings formed one of Mr. Waterhouse's contributions to this year's Royal Academy Exhibition.

Ceiling from No. 15, Hanover Square.

This ceiling, a singularly interesting example of late eighteenth century decorative plasterwork, is from No. 15, Hanover Square (now demolished), formerly the premises of the Royal Orthopædic Hospital. The original paintings, together with reproductions of the plasterwork, are now in the Victoria and Albert Museum, South Kensington.

Two Paris Monuments.

The statue to Gambetta in the Place du Carrousel consists of a lofty pyramidal feature raised on an ornate base, the architectural detail being particularly vigorous and refined. The statue shows Gambetta as organiser of national defence, with supporting decorative statues, or sub-motifs, representing Truth and Strength; and, at the top of the pyramid, Democracy—a woman seated on a winged lion. This symbolic group, with its splendid setting, is by far the most successful of its kind in Paris. The Monument to the Glory of the French Republic was originally ordered by the Government of the Second Republic in 1848, but the sculptor had not finished it before the convulsion of the *coup d'état*, with the consequent change of Gov- ment. For many years the monument was hid but at last the deserving artists received t reward—on the great National Fête day, July 1880, when it was formally unveiled. The s pedestal is 50 ft. high, and the statue is 32 ft the top of the olive branch. The seated br figures placed around the pedestal as sub-m represent Liberty, Equality, and Fraternity. front is a bronze lion with the urn of "suff universel."

Architectural Ideas in War-Time.

In this drawing, Mr. Gordon Hemm has conce an unusual but by no means undignified entranc a large building. Criticism is perhaps invited the purely decorative use of coupled columns either side of the arched opening. That t perform an æsthetic service in concealing w would otherwise be the bareness of the piers be is, however, their obvious justification.

The Bibliothèque Royale, Brussels.

The palace of the Dukes of Brabant, Brussels, burnt down in 1731, and the Court of Brussels removed to the Hôtel d'Orange. In 1750, Cha of Lorraine, Regent of the Netherlands for sister-in-law, Maria Theresa, acquired this an château and transformed it into a modern pa A foreigner from the Court of Vienna, he ign Flemish tradition, and caused his architect, F to produce a design that should reflect the sober work of the Louis XV. period. Charles completed the entrance façade; the two other fr (the central of which is illustrated on the dou page plate in this issue) were not built until exhibition of 1830. In these, however, the de and detail of the existing elevation were scr lously preserved. The new wing was intended a museum of industry; hence the sculpture and pediment are by no means congruous to its use royal library. The courtyard as it now sta cut off from the Rue du Musée by a low but balustrade, with its formal garden and bay-t in tubs, and the admirable statue of Arch Charles (erected in 1846), has an assured effe dignity and restfulness.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

FOLLOWING are the arrangements for informal conferences (3 p.m.) of Session 191 of the R.I.B.A.

November 22.—The Function of an Architec Society. Opener, Mr. Sidney Webb; chairman, Henry T. Hare, President.

December 5.—Unity of the Profession. Op Professor F. M. Simpson; chairman, Professor W Lethaby.

January 9, 1918.—Co-operation amongst Archit and Specialisation. Opener, Mr. H. V. Lanche chairman, Professor Beresford Pite.

February 15.—National Policy of Town Impr ment (Conference with Public Men and Writ Opener, Mr. Clutton Brock; chairman, Sir A Webb, K.C.V.O., C.B., R.A.

March 13.—National Housing and National Opener, Professor Adshead; chairman, Mr. W Davidge.

April 10.—Relations of Architecture and Engi ing (Conference with Engineers). Opener, Prof W. R. Lethaby.

May 8.—Quality of Work and the Present Syste Competitive Tendering (Conference with Builders Workmen). Chairman, Mr. H. V. Lanchester.

June 12.—Proposed Parliament of Building Tr

HOUSING PROBLEMS AFTER THE WAR.[*]

BY PROFESSOR S. D. ADSHEAD, M.A., F.R.I.B.A.

commencing this the first of a series of lectures on 'Housing Problems After the War," we are eminded that this world-upheaval in which we are ged will appear to the historian of the future not e as a period of Titanic struggle between armies e field of battle, but also as a period of social ent and as a prelude to basic social reconstruction social reform. It behoves those of us, therefore, are not actually fighting in the field, to struggle the problems which this upheaval entails.

The Demand for Improved Conditions.

t the outset we are faced with a universal demand e part of the working classes for improved condi- of living. Directly, they ask for more wages; ectly, for better housing. Of the two demands pliance with the latter is now admitted to be a er of unquestionable importance, if not in justice e classes affected, then in the interest of national ency.

r half a century our so-called social reformers, not ciently enlightened to probe deeply enough into causes of unrest, intemperance, incapacity, and ral social depression, which have so seriously ted our industrial population, have persistently avoured with patch and plaster to ease the itch irritation without at the same time prescribing for inherent disorder. To improve the housing con- ns of the working classes is to stimulate their life whole.

mperance reform without improvement of ronment can at best but produce asceticism or tude of mind. To educate the badly housed is ly to mock at their opportunities and open their to their disabilities.

o raise the wage of the worker, and at the same leave him badly housed, is to provide powers for hase where no commodity can be found. The e of all such piecemeal and superficial reforms is nctly local and incidental. The root of all such l evil really lies in the squalor of the home. But has been an awakening: the national conscience been aroused, and on all hands, and, I think, ngst all political parties, improvement in the hous- conditions of the working classes is now regarded universally accepted as the first and most impera- of social reforms.

ut, apart from all this which sounds purely rmatory, using the word in its nineteenth-century e, the prosperity of the country demands, both there shall be more houses, and also that there be better houses. We want more houses to meet redistribution of industry, and we want better ses to ensure a higher standard of individual ency.

Extent of Housing Requirements.

is calculated by the statisticians that increase in lation, and other causes, have, in peace-time, ssitated the building of 75,000 new houses in this try annually to supply normal demands. Instead ,000 per annum, something less than 20,000 houses been erected since war began.

e are now in the fourth year of the war, and the sticians tell us that by the end of the present year hall need something like 300,000 houses to make the shortage. Add to this the number of houses have been ear-marked as unfit for human habita- and for the occupants of which new houses will to be provided, and the grand sum-total may be said to be half a million houses required within twelve months after the war.

But are these factors all applicable and conclusive? Are we justified in assuming that calculations based on factors which may hold good under normal conditions will hold good under the conditions of a world upheaval? Can we really calculate by these methods the actual number of houses that will be required? I don't think so. Personally, I have the greatest suspicion of all statistics except such as are based on direct circumstantial evidence, and when facts are *per ipse* not only conjectural, but also liable to misapplication, then instinct sharpened by close observation is the surer guide. Obviously, with the great changes in social and commercial conditions that we see formulating all around us, old factors on which are based housing deficits, may have been reasonably sound under pre-war conditions, but are quite inapplicable to-day.

To the lay mind which is not cognisant of the fact that it takes 75,000 new houses to meet the increase in the population in one year, and is not aware that house-building has practically ceased, it may appear extraordinary that there is any shortage in houses at all, everyone realising at the present time that the absence of, say, three to four million men, many of whom have broken up their homes, must have increased the number of vacant houses to an extraordinary degree. That the absence of so many men has had a certain effect in reducing the demand for accommodation is unquestionable, but, on the other hand, it must be remembered that there has been a very great increase in the financial prosperity of those of the working classes and small tradesmen who have been left at home, and I think that we may assume that there has been a great increase in the relative number of those of the working classes who under normal conditions would be in a sufficiently sound financial position to occupy a separate house and set up a home.

Half a Million Houses Insufficient.

Here, then, we have an important factor tending to an increase in the number of householders which possibly quite counterbalance the vacancies caused by those absent at the front. But does the balance of these conflicting issues leave the statistician justified in assuming that half a million is an accurate estimate of the number of houses required? I don't think so; for we nave to consider not only those factors of immediate disturbance, but also those that are slowly formulating. Let me particularise: Take the question of transport. This, even before the war, was threatening to redistribute completely the population; its effect later will be even more pronounced. Take the domestic servant question. Probably half the women engaged in domestic service before the war are now finding, and will continue to find, independent employment elsewhere, thus vastly increasing the demand for accommodation in small houses, where they will live independently and require to a large extent homes of their own. Or take the factory question. Probably half the factories engaged in specific industries before the war, will have so changed their methods as to have necessitated the reassembling of their employees on such a scale and in such a way that there will be created an entirely new field in regard to industrial housing demands, and this quite apart from new conditions created by the building of entirely new factories, with their complementary housing schemes, the number of which will increase by leaps and bounds. Or take another factor in the ferment: the demand for shorter working hours. This, if complied with, will afford employees working in towns increased time and greater opportunities for the daily journey between work and home, the result being that homes will tend to be set up in more desirable positions further from work and town. Or, finally, take the question of a general rise in the status of living. It follows that this will create a demand for a better house and for a house of an improved and up-to-date type, at the same time tending to empty mean and sordid streets as well as the unhealthy slum.

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[*] rst of a course of six lectures now being delivered by Professor ad at University College, London (Gower Street, W.C.1) on Tuesdays, m., beginning November 6.

These are a few of the more obvious of the causes that will tend to produce quite incalculable consequences in regard to the demand for housing accommodation after the war; and whilst it may be admitted that such changes in social movement as have been outlined were active even in pre-war time, it is clear that, as forces, in tending to increase the demand for housing accommodation in the future, they will be so intensified that we may regard them in the light of new conditions.

One of the leading manufacturers in this country has told me that it takes £200 of capital to employ one man. On this basis a very crude idea can be formed of the number of men, and consequently the number of houses, required in connection with the establishment of an industry, given the amount of capital to be invested in the undertaking. This, as a suggestion for the statistician, is interesting.

But it is really quite impossible to estimate accurately the exact number of houses that will be required by, say, two years after peace is declared, and this not only because the factors mentioned are too elusive, but also because it is very difficult definitely to decide between a questionable need and a legitimate demand. The demand will undoubtedly increase with the supply, and here we may point out that if the State is to assist housing, which it certainly must do, one of the greatest difficulties it will have to contend with will be to discriminate between real needs set up to meet the universal demand for a higher standard of living and the development of a more vigorous and capable population, and those other demands which will merge into these, but which in fairness to the taxpayer should only be met by what are known as purely economic means.

In Favour of Subsidies.

Provided every precaution is taken to discriminate between these two classes of demand, I am one of those who are entirely in favour of subsidising housing schemes at the present time. It is just as reasonable, in the social structure, that society should assist its weaker members as it is that philanthropy should be operative in the care of the blind. Or, viewed not from a sentimental, but purely from a hard economic standpoint: if an employer finds it profitable to pay the time of his employees in sharpening their tools, surely it is an economic proposition that the nation subscribe to the greater efficiency of its working classes; or, to look at it in another way, what is the sense in spending £18,000,000 per annum on education in order to create an educated democracy who are thereby merely better able to realise the disabilities they labour under in living amidst depressing surroundings if not in insanitary homes?

No, quite apart from the question of supplying houses to meet the demands of those who are well able to pay for them, a requirement which will in due course be met under the ordinary process of supply and demand, it is imperative that this country shall forthwith set about assisting in the supply of good houses to meet the needs of those of its workpeople who under war conditions are quite unable by their own efforts to do so, and this not merely to satisfy the sentimentalities of the reformer, but to ensure that the nation shall have workmen whose status shall be raised and who can enable it to carry on its industries with that efficiency which it will be called upon to exercise after the This argument has been put very forcibly in a ser articles in the Press expressing the opinions of employers of labour as Lord Leverhulme an Robert Hadfield, and need not be pressed further

The Local Government Board Circular.

I have suggested that the need of housing acco dation for this class is serious. So serious is it local authorities, in response to an invitation o Local Government Board to state the needs of locality, have actually announced to date (that say, so many of them as have replied) that their bined needs approximate to a requirement of 25 houses, and there are many local authorities, incl all those in Scotland, who have not yet replied.

Birkenhead has decided to build 1,500 ho Gillingham wants 500. Consett, in Durham, say are required immediately and 500 more at the clo the war, and expresses the opinion that if the hours day were introduced into the iron and trade still another 500 would bequired. My f Mr. Thomson, the City Surveyor of Dundee, 6,000 new houses are wanted in this district, and that there have been 2,000 war marriages in that Barrow has a scheme for erecting about 10,000; S Wales is arranging for the building of 12,000 ho and so on all through the land.

Ways and Means of Supply.

So that at the moment it is not a question of bers, or whether houses are required, it is a questi deciding upon the ways and means by which as as possible can be supplied. Now, in view of exceptional conditions that will obtain for some ti come, it is admitted that the emergency can neve met under the normal conditions of supply demand. The State will need to intervene. It have to provide both financial assistance and dire so that the problem resolves itself into these questi What are to be regarded as suitable types of cott for erection; by whom and under what circumsta are they to be erected; and what, if any, are t regarded as the qualifications of an eligible tenant

Suitable Types of Cottages.

First as to suitable types of cottages. Assu that financial assistance is provided, naturally it w be a mistake and unfair to the taxpayer to assist i providing of houses that could be described as unn sarily commodious or luxurious; still, at the same we must pay very careful attention to what have to be regarded in the interest of health, happiness, decency as minimum needs. Take the questio accommodation. I think that on every hand it is agreed that no cottage should have less than t bedrooms, of which the superficial area of the la should be not less than 150 ft.; the Royal Institu British Architects say 160 ft.; some authorities inclined to ask for less, some for more. The li room on the ground floor should be of not less di sion. It is also generally agreed that every cot shall be supplied with some arrangement for provi hot water other than that of boiling it in a kettl the kitchen fire, and every cottage should be prov with a bath. As to whether any of these subsi cottages—for that is what they will be—should include a parlour, is a controversial question; exceptions, I would say no. If a parlour is provi then the extra expense of the parlour should certa be an economic charge. The point is that it woul a pity if the individuals that make up the indus community find themselves in the position of not b able to occupy more roomy houses without at the time having to leave the district to which they attached.

(*To be continued.*)

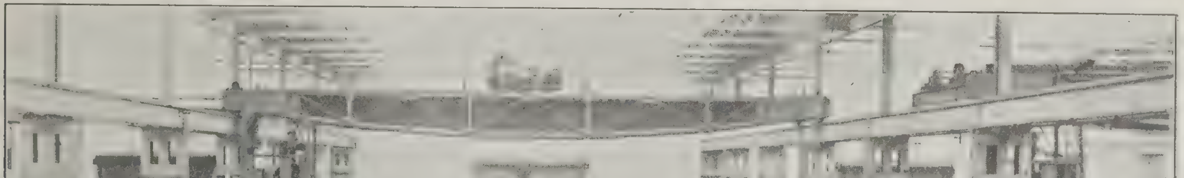
WAR·BVILDINGS·SECTION

NEW ELECTRICAL WORKS, HUDDERSFIELD.

E firm of E. Brook was founded in 1904 for the purpose of making e-phase motors and starting gear. works were then situated in Thread- le Street, Huddersfield. In August, , the business was converted into a private limited company and the name was changed to E. Brook, Ltd.

The demand for electric motors warranted the firm in taking larger premises, and a desirable place was found at "Nelson" Mill, Colne Road, to which the whole works were removed in November, 1905. In the meantime a fair demand had arisen for three-phase motors and switchgear, and the manufacture of this class of work was begun in June, 1906.

In October, 1915, it was decided to build



View in Fitting Shop, No. 2 Bay, showing Balancing Frames and Small Tool Stores.

NEW ELECTRICAL WORKS, HUDDERSFIELD. J. B. ABBEY AND SON, ARCHITECTS.

a first-class engineering shop, and a suitable site was found in St. Thomas' Road, Longroyd Bridge. Plans were prepared by Messrs. J. B. Abbey and Son, and tenders were let to various contractors in February, 1916. Mr. H. A. Bennie Gray drew up the specification of the steel work in the main shops and foundry, and also assisted in drawing up the specifications for the lift, cranes, and foundry plant.

The new works were completed in May, 1917, but before that date the whole of the machinery had been removed from Colne Road and put to work at St. Thomas' Road. The new machinery had been delivered and fixed, but the office and some of the smaller buildings were not completed until September, 1917. The departments are: Turning, fitting, winding, wiring, foundry (brass and iron), stores, electrical testing, packing, pattern shop, drawing office, general office, and core-making shops.

The works are planned out with the idea of providing for easy progress of all materials through the shops with the least possible loss of time and saving of labour. All finished goods and parts are brought into the front end of the building and from there taken to stores and warehouse. Raw material is taken in at the yard gates and distributed to the several departments and stores.

The works have a frontage of 282 ft. to St. Thomas' Road and 432 ft. to Graham Street, and cover an area of about 2½ acres. The elevations to the streets are faced with Crosland Hill stone and ashlar dressings. The main block is a two-storey building and basement, and comprises the following accommodation. On the ground floor: Entrance, waiting-room, general office (58 ft. by 36 ft.), two private offices, each 24 ft. by 18 ft., cloak room, lavatory, and general stores room (58 ft. by 36 ft.), together with loading stage and motor garage. The front private office is surrounded with an oak-panelled dull-polished dado 8 ft. high. The other rooms have boarded dados in pitch pine. The floors of the offices and waiting-room are covered with oak parquetry and polished. The floors to the loading stage and garage are of reinforced concrete designed on the Considère system.

On the first floor are two large rooms, each 84 ft. by 36 ft., one used as a drawing office and the other as a stock and show room. The basement contains cooking kitchen, larders, girls' dining room, men's dining room, lavatories fitted with hot and cold water, strong room, heating chamber, coke store, electric sub-station, and tools store. The kitchen is fitted up with every convenience on the latest principle, and is surrounded with a tiled dado 8 ft. high. The dining rooms have boarded dados of pitch pine and the walls of the lavatories are tiled. The floors of the kitchen, dining rooms, and lavatories are of polished concrete. The hot water is obtained from one of Wrights' "B.T.U." circulators and drawn from a storage cylinder. The warming installation is on the low-pressure hot-water system, with radiators in the various rooms. An electric lift serves each floor.

The machine shop is 168 ft. long and 163 ft. wide, and has a floor area of 3,043 square yards. It adjoins the main block and has a direct communication with, and is on the same floor level as, the dining rooms. The roof is of steel construction and covered with rough plate-glass and Bell's asbestos slates. The height from the floor to the ridge is 36 ft. The floor is covered with tongued and grooved b on coke-breeze concrete. The workn lavatories are built out, but are appro from the workshop and are fitted up o most up-to-date principle. The floor polished concrete and the walls are The building is heated throughout o low-pressure hot-water system.

The foundries are situated to the re the machine shop, and comprise an foundry 120 ft. long by 40 ft. wide by high, together with cupola, lift, coke and sand shed.

The brass foundry is 40 ft. long by wide by 20 ft. high, and fitted with u date furnaces. The walls of the foun are built of brick. The roofs are of and covered with rough plate-glass asbestos slates.

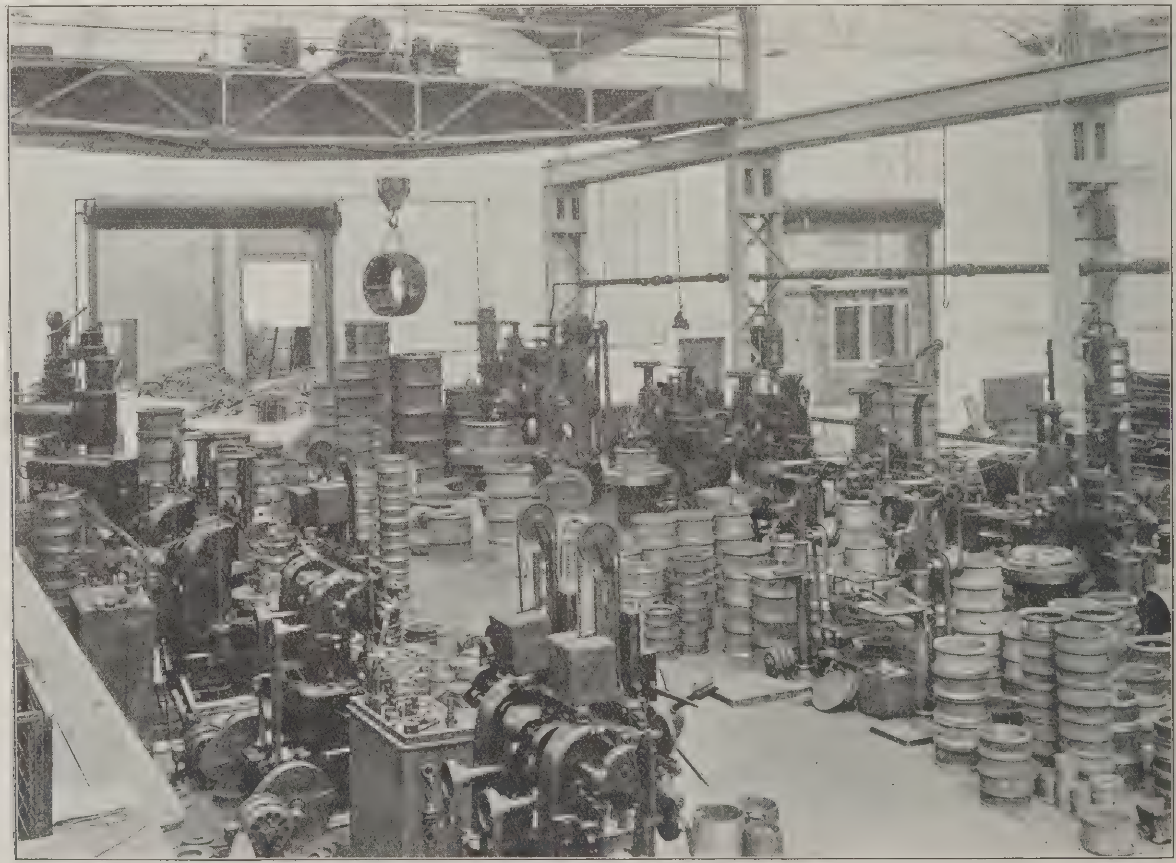
The joiners' shop and pattern s have a frontage to Graham Street an River Colne. The joiners' shop is 30 f 25 ft., the pattern store 45 ft. by 25 ft. floors are covered with tongued grooved boards on coke-breeze conc the roofs are glazed and blue-slated.

The main entrances to workshop foundries are approached from Gra Street.

There is capital storage ground or north and west sides of the works, tog with good store sheds, weighing mac and weigh house.

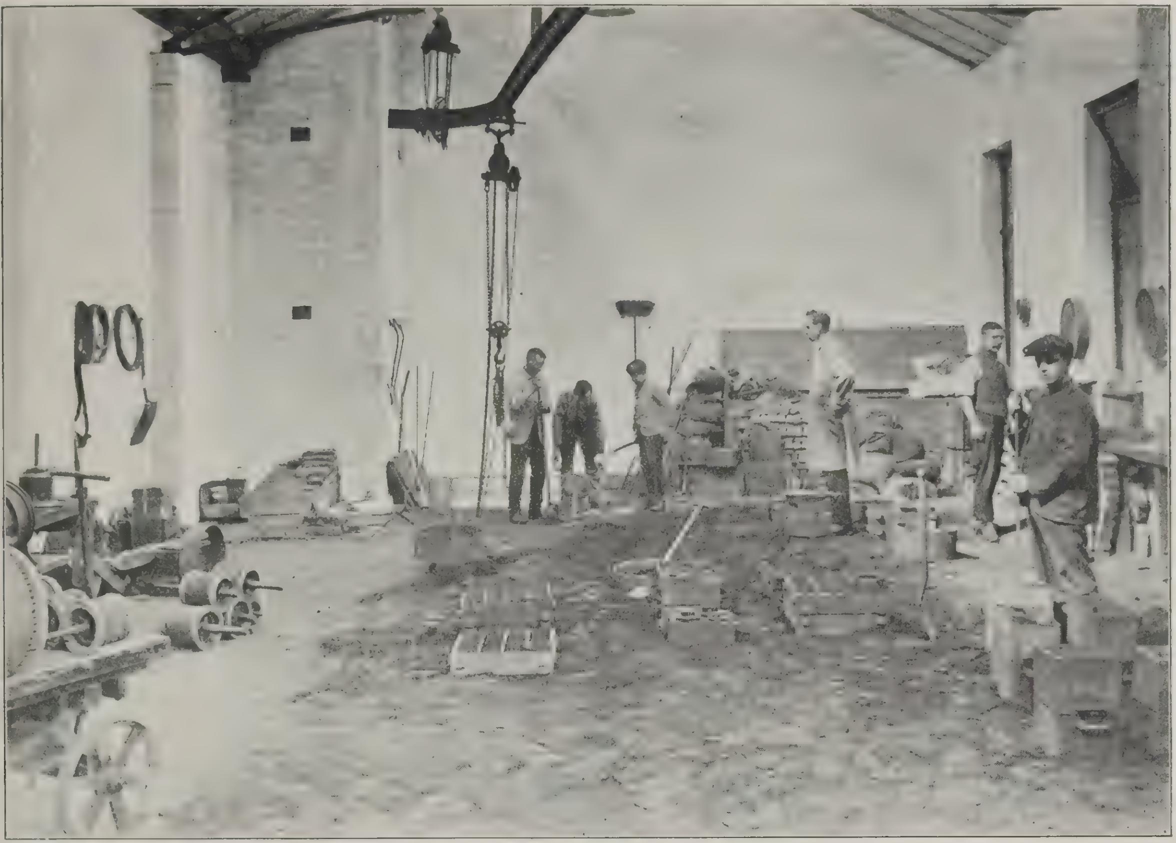
The general office equipment was plied by Messrs. Taylor and Hobson, Huddersfield.

The canteen is open for the purpo supplying light refreshments and thirty minutes in the morning and a in the afternoon, besides the usual day meal hour. The canteen equip was supplied by the following fi Messrs. Rushworth, Ltd., Huddersf

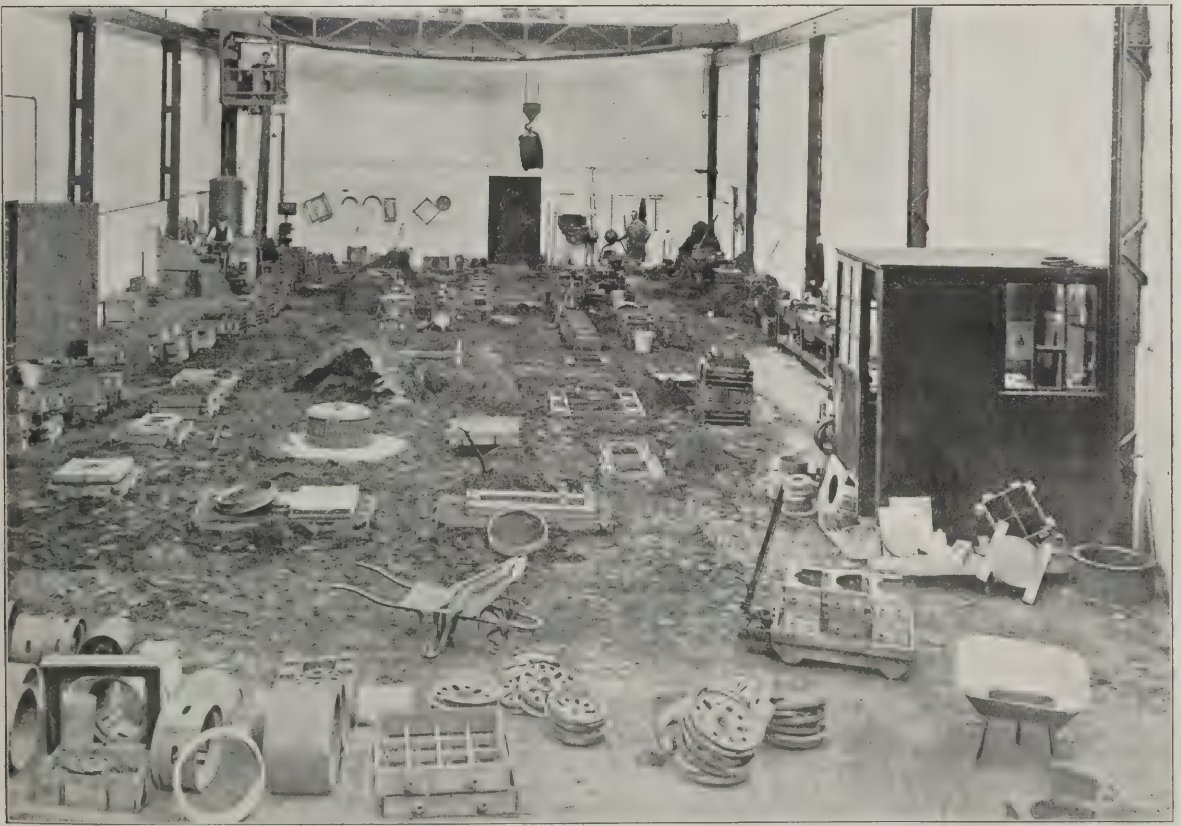


View in No. 3 Bay, showing Boring and Turning Machines and Lathes, and Travelling Cranes fitted with Electric Motors for all motions.

NEW ELECTRICAL WORKS, HUDDERSFIELD. J. B. ABBEY AND SON, ARCHITECTS.



View in Brass Foundry, showing Rotors with Brass Ends cast solid on to the Copper Rods.



View in Iron Foundry.

NEW ELECTRICAL WORKS, HUDDERSFIELD. J. B. ABBEY AND SON, ARCHITECTS.

Messrs. Hygienic Stove Co., Ltd., Huddersfield; Messrs. McKitrick Bros., Huddersfield.

The works were carried out under the superintendence of Messrs. J. B. Abbey and Son, architects, of Huddersfield, by the following contractors: Mason and bricklayer, Thos. Bottomley and Son, Ltd., Huddersfield; carpenter and joiner, Geo. Ainley and Sons, Huddersfield; plumber and glazier, T. W. Crossley, Huddersfield; plasterer, Jno. Robinson and Son, Huddersfield; slater, Pickles Bros., Leeds and Huddersfield; painter, Lunn and Cardno, Huddersfield; concreter, John Cooke, Huddersfield; parquet flooring, Damman and Co., Ltd., London; tiler, Alfred Whitehead, Leeds; steel work, W. H. Heywood and Co., Huddersfield; iron work, Abm. Pullman and Sons, Halifax; heating, Rosser and Russell, Ltd., London and Leeds; revolving shutters, W. F. S. Holt, Bradford. The contractors for the equipment were: Cranes, Messrs. Thos. Broadbent and Sons, Ltd., Huddersfield; Messrs. Herbert Morris, Ltd., Loughborough; lifts, Messrs. A. and P. Steven, Glasgow; Messrs. George Green and Co., Keighley; lathes, planers, etc., Messrs. Summerscales, Ltd., Keighley; Messrs. Thos. Ryder and Son, Bolton; Messrs. Brown and Ward, Ltd., Birmingham; Messrs. Pollock and Macnab, Ltd., Stockport; Messrs. Summerskill Bros., Sowerby Bridge; Messrs. Thos. W. Ward, Ltd., Sheffield; Messrs. Chas. Churchill and Co., Ltd., London; Messrs. Burton Griffiths and Co., Ltd., London.

R.I.B.A. NATIONAL HOUSING COMPETITION.

The following important announcement has been issued by the Royal Institute of British Architects:—

HOUSING OF THE WORKING CLASSES IN ENGLAND AND WALES: COTTAGE COMPETITIONS.

The Local Government Board, being desirous of obtaining designs for cottages suitable for the housing of the working classes, have placed at the disposal of the Royal Institute of British Architects a sum of money for this purpose, and the Institute has therefore decided to invite its Allied Societies to assist in obtaining designs under the following conditions:—

For the purpose of the competition, the country is divided into six areas, comprising the districts of the Allied Societies and the R.I.B.A., as follows:—

I. Northern Area.—Northern Architectural Association, Leeds and West Yorkshire Architectural Society, York and East Yorkshire Architectural Society Sheffield, South Yorkshire and District Society of Architects and Surveyors.

II. Manchester and Liverpool Area.—Manchester Society of Architects, Liverpool Architectural Society.

III. Midland Area. — Birmingham Architectural Association, Nottingham and Derby Architectural Society, Leicester and Leicestershire Society of Architects, Northamptonshire Association of Architects.

IV. South Wales Area.—South Wales Institute of Architects.

V. South-West Area. — Devon and Exeter Architectural Society, Bristol Society of Architects, Hampshire and Isle of Wight Association of Architects.

VI. Home Counties Area.—Royal Institute of British Architects.

CONDITIONS.

VI. Home Counties Area.

1. Pursuant to the scheme above described, the Royal Institute of British Architects invite designs for cottages in accordance with the instructions and particulars stated below. The competition is open to any British subject.

2. The designs are to be suitable for erection in urban and rural districts in the counties of Norfolk, Suffolk, Cambridge, Huntingdon, Middlesex, Essex, Hertfordshire, Bedfordshire, Oxfordshire, Buckinghamshire, Berkshire, Surrey, Sussex, and Kent.

3. The designs are to include four classes or types of cottages as described below, and premiums are offered as follows:—

	1st.	2nd.
Class A	£100	£50
,, B	100	50
,, C	100	50
,, D	50	30

4. The adjudication will be made by a committee of not less than three architects appointed by the Royal Institute of British Architects, and their judgment is to be accepted as final.

5. It is to be understood by competitors that the payment of the premiums conveys the absolute possession of the designs, including all copyright or other rights, and that the promoters will be at liberty to make any use whatever of the designs, and to publish them with the names and addresses of the authors. The promoters reserve the right to exhibit publicly, after the award, all or any of the designs as they may think best with the names of the authors attached. No architect shall compete in more than one area.

6. Designs are to be prepared strictly in accordance with the instructions below, and any design which does not so conform will be excluded. On this point the Committee of Selection are to be the sole judges.

7. Designs are to be delivered carriage paid to the Secretary, R.I.B.A., 9, Conduit Street, Regent Street, London, W.1, on or before January 13, 1918.

8. The unsuccessful designs will be returned to the authors carriage paid as soon as practicable.

9. Any questions must be addressed to the Secretary of the Royal Institute of British Architects, 9, Conduit Street, W.1, on or before November 27. Replies will be issued to all competitors as early as possible.

10. Each set of designs is to be accompanied by a sealed envelope containing the name and address of the author.

11. No motto or distinguishing mark is to be put on the drawings.

12. Every care will be taken of the drawings, but the promoters will not be responsible for any damage they may sustain, or for their loss.

13. Designs may be submitted in any or all of the classes as follows:—

Class A.—Living room, scullery, etc., and three bedrooms.

Class B.—Living room, parlour, scullery, etc., and three bedrooms.

Class C.—Living room, parlour, scullery, etc., and two bedrooms.

All the above to be treated as two stories.

Class D.—Variations of either A, B, and C planned entirely or mainly on one floor.
Larder, fuel store, w.c. or e.c., cupbo
etc., to be included.

14. In all cases back additions are
avoided or minimised as much as pos

15. All houses are to be provided w
fixed bath and a cold-water supply.
rangements for the supply of hot wate
to be indicated on the plan.

16. Positions of all principal piec
furniture, such as dressers, tables,
etc., together with opening of doors
points of the compass, and dimensio
rooms, are to be indicated on the pl

17. In Classes A, B, and C se
houses must be shown as a block
which three are to be planned in d
the others in outline only. Of these t
one is to be an end or semi-detached h
another a terrace house or one bet
party walls with narrow frontage (no
ceeding 18 ft.), and a third with
frontage. The depth of the site is l
the discretion of the competitors, an
site may be regarded as level.

18. The general height of rooms
be not less than 8 ft., the floor area o
principal bedroom to be not less
160 ft., and no bedroom to be less
70 ft.

19. The plans may be prepared wi
regard to any existing by-laws or loca
provisions, the object being to show
best types possible if existing restric
are removed.

20. Each design is to show plan
each floor, one section indicating the
case, and two elevations, and to be d
to a scale of ⅛th of an inch to the fo
half double-elephant sheets. No
drawings to be submitted.

21. All drawings are to be in line
without washes, with the walls black
and are to be sent flat.

22. The designs in each of the Class
B, C, and D are to be on separate sh
Notes of materials, etc., are to
printed on the drawings, together wit
cubic contents of each house meas
from one foot below the floor to half
up the roof. No separate report is n
sary.

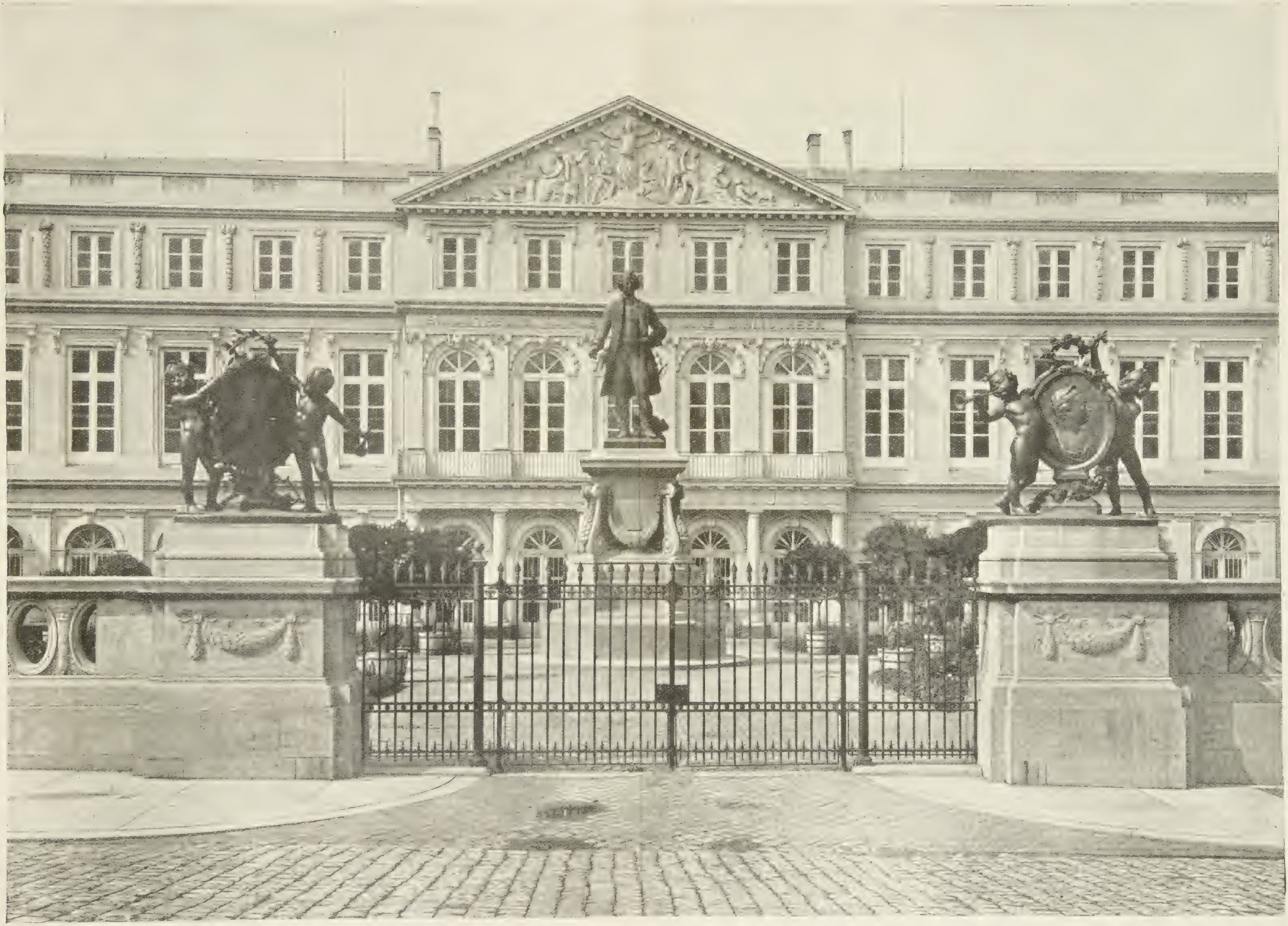
23. Wherever possible, materials o
locality, if reasonably obtainable, s
be specified, but as there exists at the
sent time a serious shortage of ce
materials, competitors are invited to
sider and suggest the substitution of o
with a view to facilitating and cheap
construction. It is essential that
economy be exercised throughout
design, and this will be an important
sideration in making the awards.

COMPETITION.

Cottage Designs for South Wales

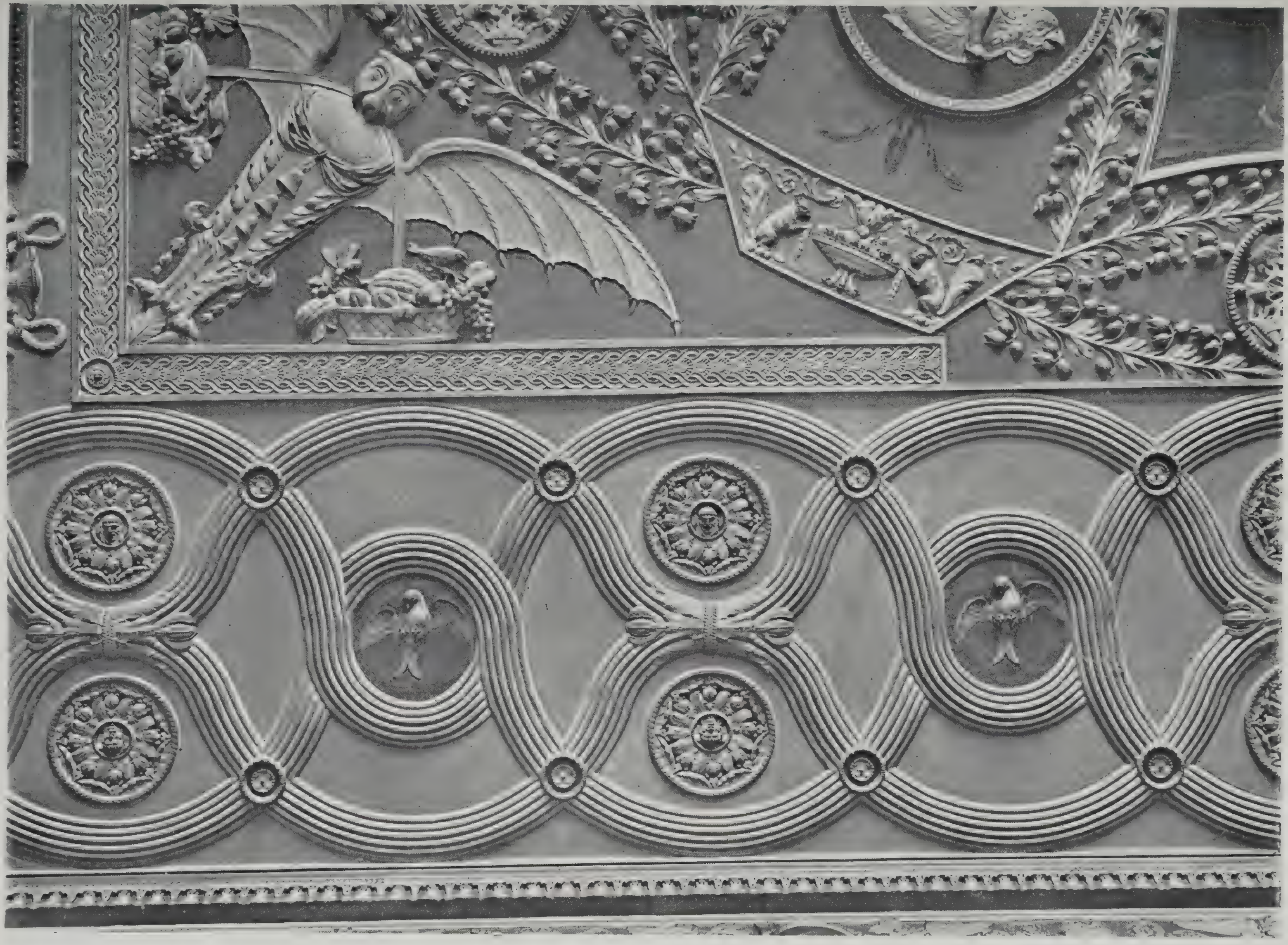
Designs are invited for four spe
types of cottages suitable for the indus
classes in the South Wales area.
competition under the charge of
Royal Institute of British Architects w
held, when premiums of £100 and £5
the best designs of each of three types
£50 and £30 for the fourth type, wi
awarded. Designs must be submitte
accordance with the conditions not
than January 13, 1918. Copies of c
tions may be obtained on or after No
ber 10 from Mr. C. H. Kempthorne,
secretary, South Wales Institute of A
tects, Albert Chambers, High St
Cardiff.

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



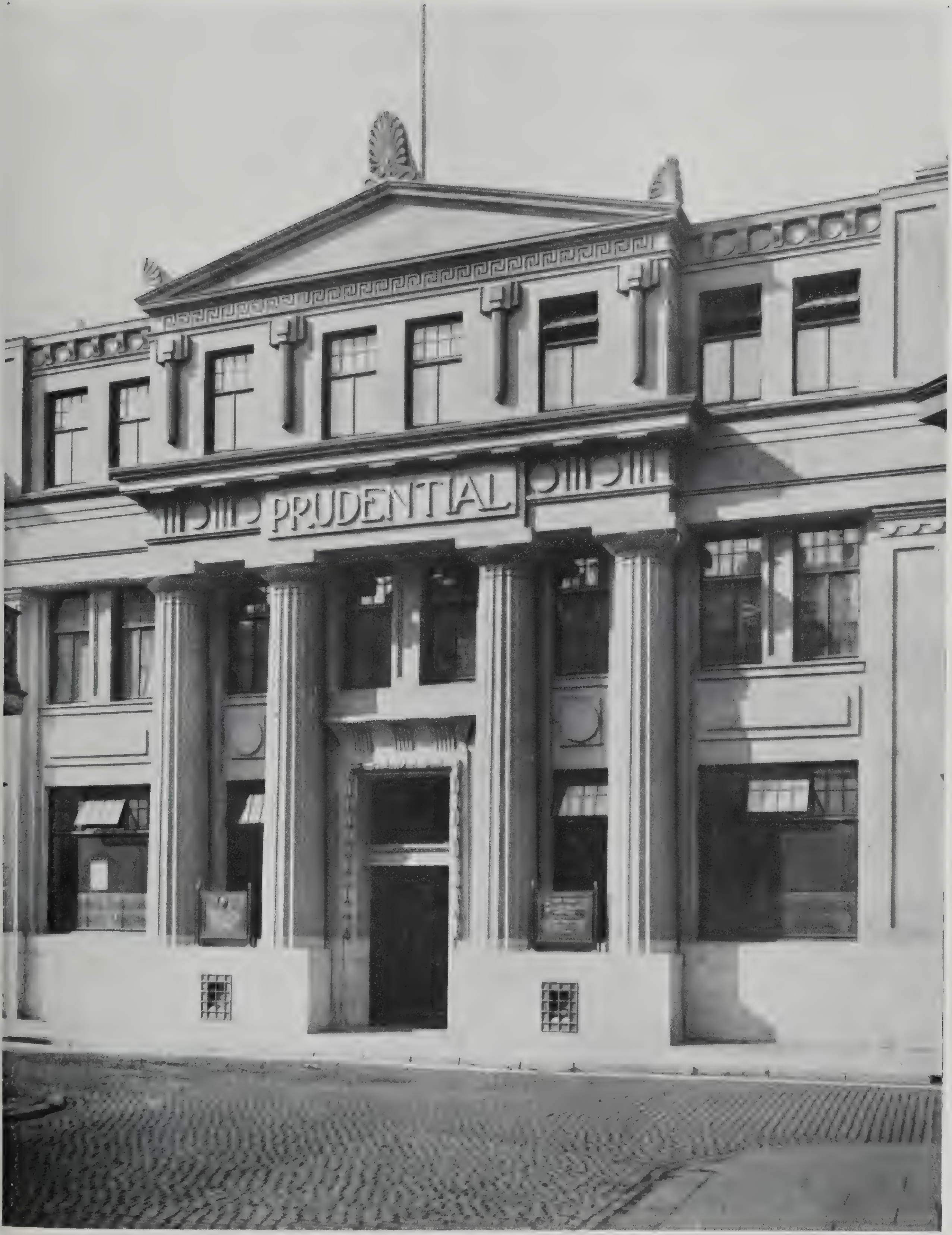
MONUMENTAL ARCHITECTURE (SERIES II.). XXXI.—THE BIBLIOTHÈQUE ROYALE, BRUSSELS.

AFTER FOLTE, ARCHITECT.



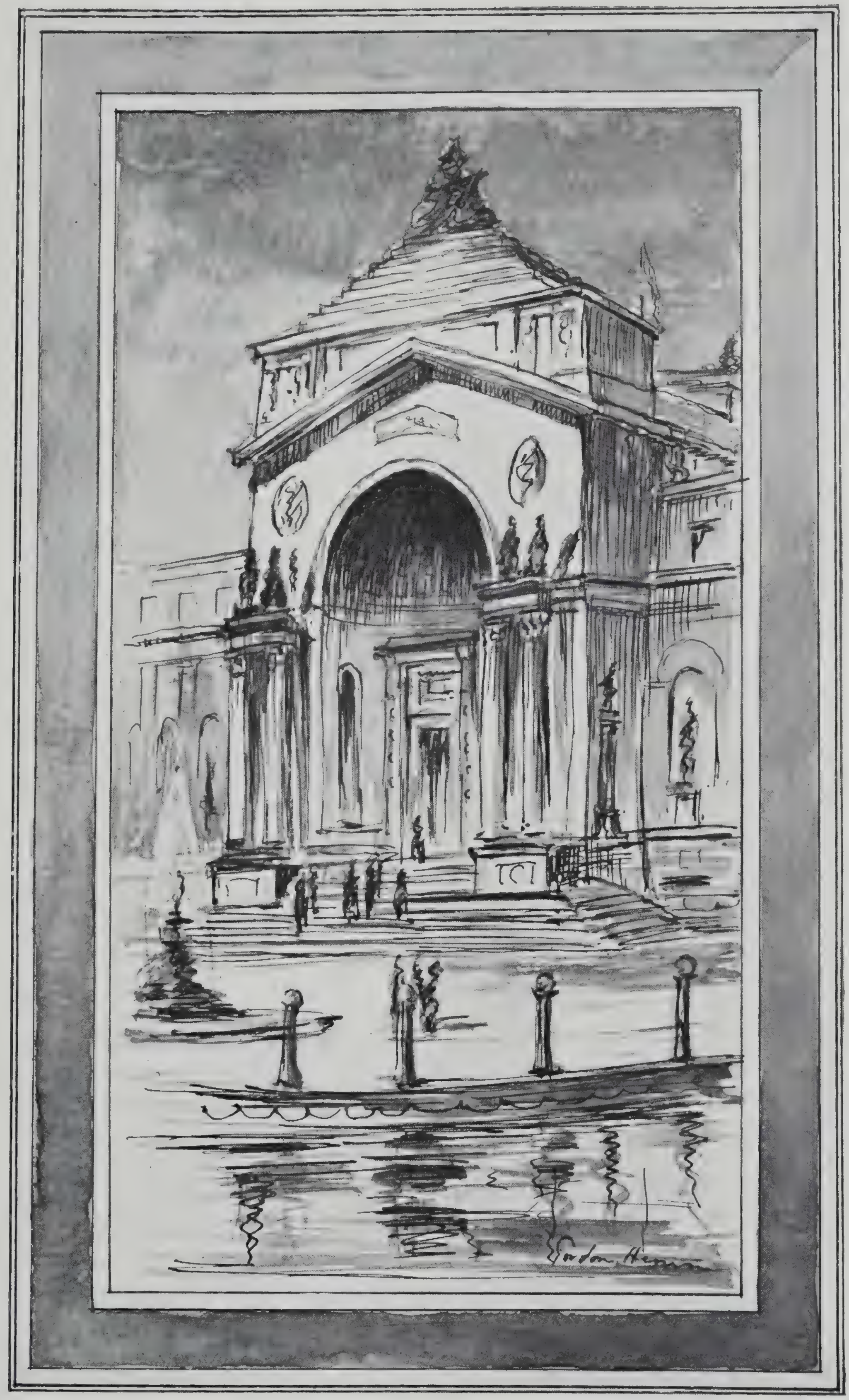
DETAILS OF CRAFTSMANSHIP (SERIES II.). XLVIII.—DETAIL OF CEILING FROM No. 15, HANOVER SQUARE (FORMERLY THE ROYAL ORTHOPÆDIC HOSPITAL).

(*Reproduced by courtesy of the Director of the Victoria and Albert Museum.*)

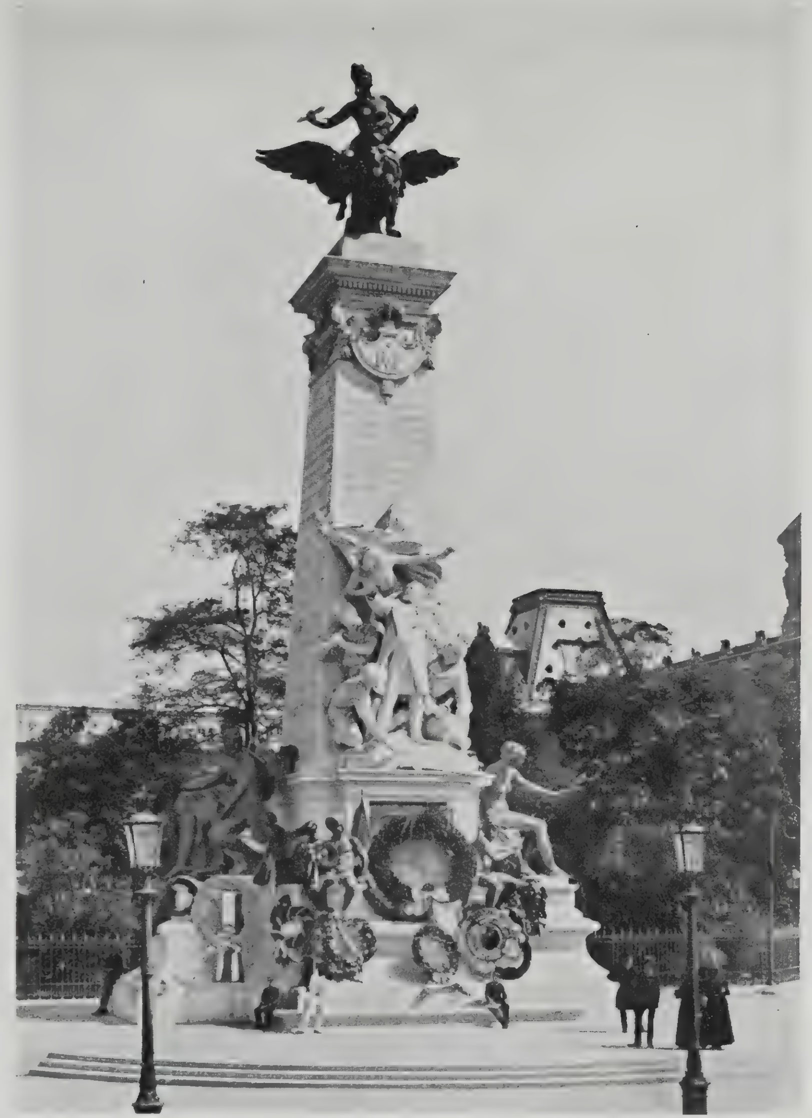


CURRENT ARCHITECTURE (SERIES IV.). XXXII.—PRUDENTIAL BUILDINGS, LEICESTER.

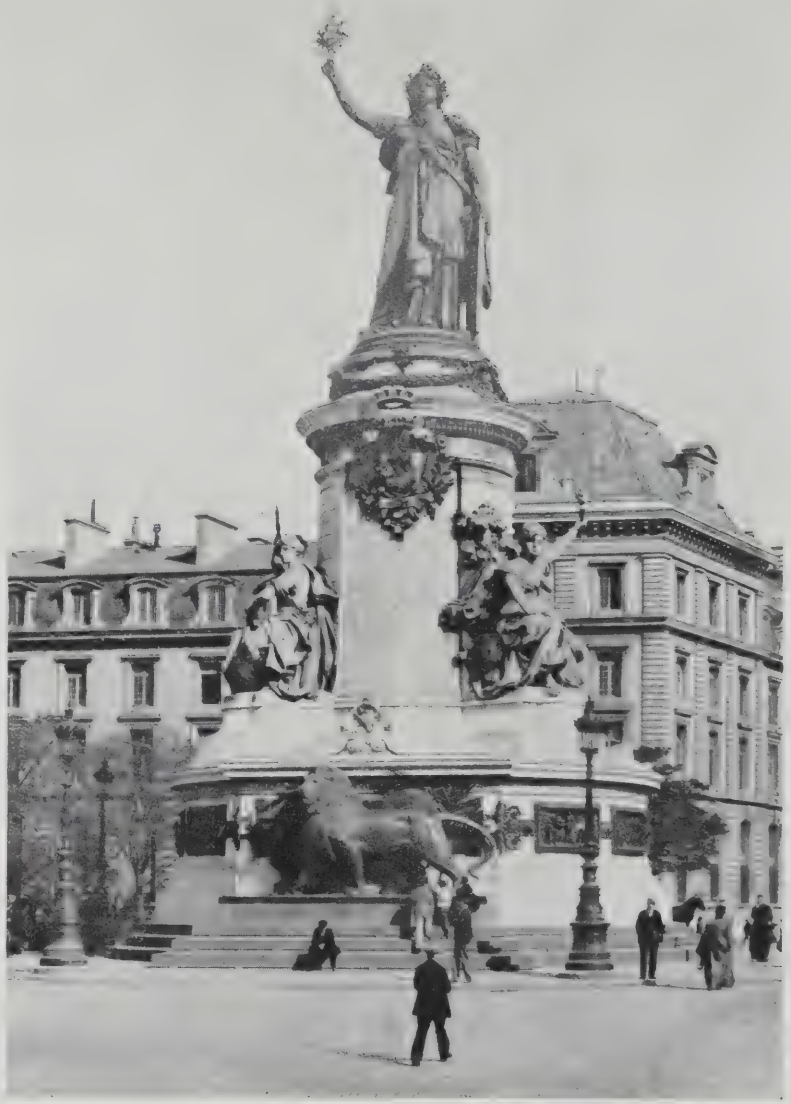
PAUL WATERHOUSE, M.A., F.R.I.B.A., ARCHITECT.



ARCHITECTURAL IDEAS.—XI. BY GORDON HEMM.



Gambetta Monument, Place du Carrousel.
Aubé and Boileau, Sculptors.



Monument to the Glory of the French Republic, Place de la République.
Brothers Morice, Sculptors.

MONUMENTS. XXXI.—SOME PARIS EXAMPLES.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

NOVEMBER 21, 1917. *TOTHILL STREET, WESTMINSTER.* VOLUME 46. No. 1194.

NATIONAL PAPER ECONOMY.

ng to the very necessary Government restric-
n paper supplies, all elements of waste must
orously excluded. Our readers, we are sure,
ladly assist in promoting this object, which is
n in national economy. They can co-operate
s effectually in either of two ways—(1) By
g a direct subscription for this Journal, or (2)
cing with a newsagent an order for its regular
ry. Casual purchases—now here, now there—
a serious discrepancy between supply and
d, and cause a wastage of effort and materials
uld obviously be reduced to a minimum but
sual and erratic purchasing.

ERE seems to be but little to criticise in the
conditions of the housing competition which has
been launched by the Royal Institute, and of
we were enabled to print in last week's issue the
lars relating to the Home Counties area. Every-
we suppose, including the promoters, will share
gret that the competition will be held in the
e of so many architects on war service, not all of
will, we trust, be absolutely debarred from
part in it. Clause 20 demands that the designs
e drawn to one-eighth of an inch to the foot on
uble-elephant sheets, and it is not likely that
is an abundant supply of this material in the
es; but this disadvantage should not be
tely insuperable. Rough pencil sketches made
naller scale on any sort of paper that happens to
ilable could be sent home to be re-drawn by
g brother-architects, who, no doubt, would be
oo glad of this opportunity of doing something
fellows at the front. There could be no objec-
this course, which has been followed systemati-
n ordinary competitions conducted under normal
ions, one man supplying the ideas and the other
ting them graphically, and perhaps traducing
roving them in the process. And was not
rative design advocated at one of those informal
ences which have turned out so successfully as
tify their continuance? Co-operative design—
all events, the collaboration of designer and
htsman—has ample sanction in Beaux-Arts
e of old standing and high tradition, and the
ions that have been urged against it have been
unsubstantial.

* * * *

ts of considerable importance are raised in the
enth and the twenty-third clauses of the condi-
f competition. In the former, it is stated that
plans may be prepared without regard to any
g by-laws or local Act provisions, the object
to show the best types possible if existing restric-
are removed." This seems to foreshadow a
needed modernisation of antiquated by-laws;
ause 23 is inferentially related to it. "Wherever
le," competitors are advised, "materials of the
y, if reasonably obtainable, should be specified;
there exists at the present time a serious short-
certain materials, competitors are invited to
er and suggest the substitution of others with a
o facilitating and cheapening construction. It
ntial that strict economy be exercised through-
design, and this will be an important considera-
tion in making the awards." By-laws of ancient date must not continue to rule out newer methods and materials of construction which, while possibly infringing the letter of the laws, fulfil them in the spirit, and meet adequately the objects with which they were framed. It may be cheerfully granted that those objects were always admirable, and that, in the long run, the by-laws have operated most beneficially in securing health and safety. Nevertheless, their administration has not been free from anomaly, and they have shown insufficient elasticity in meeting special or exceptional conditions. They need drastic revision, and will probably get it if this competition shows cause. It is, at all events, wise to leave the competitors a free hand, and it would be superfluous, if not rather sardonic, to congratulate the framers of the conditions on their courage in departing from the stereotyped formula that "designs must conform to the Model By-laws, or to the by-laws of the district in which the buildings are to be erected." Nor need we take fright at the expression "cheapening construction," which is innocuous enough if rightly construed, for all its ominous look.

* * * *

No doubt the expression is intended to mean that competitors are to exercise their ingenuity in suggesting expedients that may reduce cost without affecting adversely either the stability or the appearance of the house. It is no doubt true that cottage-design has been hitherto strongly influenced by precedent. In most cases, no architect is employed, and the builder works doggedly in the old tradition, knowing that any departure from it would probably bring him trouble from the local authority, who, for their part, have no option but to challenge every innovation. In this way progress has been checked, ideas have been stifled and uncustomary materials prohibited. Against this tyranny individuals, and even associations, were powerless. They were unable to move, even by a hair's breadth, the dead-weight of inertia opposed to originality. We have in mind an illustrative case in which, a few years back, an architect who built an experimental cottage on his own ground was summoned for infringement of by-laws that the cottage demonstrated to be unnecessary. Now, however, there occurs an unexampled opportunity for united effort—or, rather, for general concerted movement that will be irresistible to the extent that it is reasonable and expedient. New ideas evolved in the R.I.B.A. competition are not likely to meet with much opposition; and obsolescent by-laws that threaten obstruction will get short shrift. That seems to be the import of Clause 19 of the conditions of competition.

* * * *

In Classes B and C, parlours are specified. Professor Adshead has truly said that the inclusion of a parlour is a controversial question, in which, "with certain exceptions," he would "say no." In this Journal both the negative and the affirmative side have been taken by different writers. Our valued colleague "Ubique," who is now in the Army, wrote strongly against the parlour, and the present writer is in favour of its retention. In a working-class household, where children are numerous, it is the only room in which the housewife can take any pride—the only room that she can keep clean, tidy, and presentable for the reception of her friends, or of more distinguished persons, such as the rent-collector the district visitor, the children's teacher. In it are deposited all the household treasures—the family Bible, pictures and photographs, Goss china mementoes, chimney-piece ornaments, and other *lares et penates*, and perhaps a piano or harmonium. This room is a sort of domestic chapel consecrated to birthday parties, home-comings or departures, and other social functions, festal or ferial, which would lose their glamour, glory, or solemnity in the common atmosphere of the living-room. It stands for margin in reserve, dignity, repose. Its curtains can be kept clean, its furniture unbroken its hearthrug and carpet unstained and unabraded. To the "practical-minded" person a parlour may seem wasteful of space, but it is a great moral asset. Omit it, and you lower the tone of the house, and rob the inmates of the chief source of "house-pride." Those frigid utilitarians who would abolish the parlour can have but a poor acquaintance with the psychology of the working-classes. To omit the parlour from the R.I.B.A. conditions would have been a fatal blunder that would possibly have wrecked the scheme, or at least have created a fresh occasion for labour unrest.

* * * *

It a speech at Glasgow last Friday, Lord Rhondda announced that the Government had adopted as their post-war policy the report of the Whitley Committee on Industrial Reconstruction, in which, it will be remembered, the chief proposals are, in principle, almost identical with those upon which the Builders' Parliament is to be based. Employers as well as workers have been compelled, under war stress, to shed many of their old prepossessions. Both parties have got a new idea of the capacities of men and machinery. To that extent they are better educated, and there is ground for hope that the process will go on. It has been made plain that out-of-date machinery is too costly, and that a higher wages bill is a remunerative investment when the recipients respond in the right spirit. Mr. Hayes Fisher, in the address to which reference was made in these columns last week, is sound in at least one article of this faith. "People talked," he said, "of the possibilities of revolution and of industrial unrest, but there would be neither revolution nor industrial unrest if the working classes could rest by night in decently comfortable homes after a good day's work with a good day's wage. . . . He was going to be perfectly bold, and say that much the best plan was that we should not subsidise housing at all by the State, or out of the rates, but that we should so order our commercial and industrial life that the majority of the citizens would receive a sufficient wage out of which they could pay an economic rent for a decent dwelling." We have been firm and constant in the expression of this view, because we have been long convinced that it shows the true path of progress, and, coincidently, the best method of solving the chief difficulty in the housing problem. A highly educative effect of the Government subsidy is that it brings into prominence the cardinal fact that the reward of labour is inadequate. Virtually it propounds the question whether it is more economical to increase this reward in a roundabout way, such as that of voting subsidies which of course come out of the taxpayers' pockets, or in the more easily controllable form of wages. There is much murmuring about the housing subsidy being a means of taxing one section of the community for the benefit of another, but the fact that the rewards of labour have been hitherto insufficient to enable the workers to pay an economic rent is a revelation upon which it is wise to act with promptitude and liberality.

* * * *

In a letter which appears on a later page, Mr. G. Ll. Morris and Mr. H. W. Parnacott call attention to a phase of the housing question that has been hitherto rather neglected. Our correspondents handso acknowledge the influence of this Journal in res from mere oblivion the merits of late eighteent early nineteenth-century London and suburban h This has been done mainly in the fine series of with which we have illustrated select examples, of photographs were taken expressly for this pur and from time to time we have commented, in editorial columns, on the social conditions that ha to the abandonment of these serene and comfo houses by the class of tenant for whom they originally built. We had noted, too, with much faction, a growing tendency of the compara wealthy to return to such houses; but it is to be f that the war has stopped it, and that, for the mom least, the near suburbs are not irresistibly alluri persons who can afford to live further afield. It t fore becomes a question, as our correspondents su of how best to adapt these houses to the altered c tions. In a way, they are helping to solve the ho problem; but it is the wrong way. Many of the occupied by several families, for whom the int arrangements are often inadequate to the ver indecency, and who show not the slightest conce the condition of the house, inside or outside. painful to see so many of these fine houses going v to rack and ruin, landlords and tenants seeming indifferent to the obligation to "keep up appeara It seems to us that the first step towards reform convert these houses into flats. They would attract more self-respecting tenants, who v encourage the landlord to take greater care of hi perty. Beyond this, we would suggest that ho authorities, Government, municipal, or other, s take up this matter of heterogeneous tenancy in u able houses, and insist that they should be rearra in the interests of health, privacy, and convenie in short, be rendered fit for the functions that been thrust upon them. A fraction of the Govern housing subsidy might be very advantage devoted to this purpose, and could not, we imagi more profitably employed in the interests of am and decorum. We commend this idea to the R. committee on housing, with the reminder that h ripe for conversion from base uses abound in or other cities besides London.

* * * *

As, a fortnight ago, we felt it to be a duty to re strate with certain Government Departments on extravagant use of stationery at a time when general public were being advised and compell economise paper, we feel equally bound to recor this discrepancy between precept and practice ha been noted for avoidance. A new Army C Instruction issued last week stated that, owing t great shortage of paper-making materials, "the is foolscap paper for official correspondence will after the exhaustion of present stocks, and quart octavo sizes will be used, and, for short communica smaller paper, including octavo, will suffice." must be used on both sides, and "quarter ma hitherto allowed, will be abolished. In typew matter the lines must be in close order, to save and paper. Strict economy is to be exercised i use of envelopes, with a reduction in the sizes and generally there must be economy of all statio including Army forms and books. No more rivul text meandering through a meadow of margin! this is as it should be. It will invest filing opera with a variety that will be but dubiously charmin this will not be the worst hardship of the war; an inconvenience that may arise from the storin miscellaneous sizes of paper will be amply con sated if the official messages conveyed are reduc the same scale. But economy of language is difficult to secure.

HERE AND THERE.

as always seemed to me that the Man in the Street
has acquired an undue notoriety as compared with
the Man in the Train. Why should reference be
tantly made to the Man in the Street as a standard
pinion? He never expresses any opinion. He
lumb dog, and does not bark. But the Man in the
n, when you get to know him by riding up to town
him every morning except Sundays and other
lays, is apt to be persistently and perseveringly
uent. When, at the end of the journey, he rather
ntatiously leaves his newspaper on the seat (this
g the correct thing for the suburban City gentle-
to do), he carries away with him the self-com-
ent assurance that *en route* he has unloaded on
his perversion of its chief contents, with addenda,
nda, and corrigenda. For me, at all events, the
in the Train, not the Man in the Street, nor his
the Man on the Bus, is the true index of public
ion.

* * * *

erhaps I am fortunate in a robust specimen; but I
ot think that my next-door neighbour and daily
w-passenger, Blenkinsop (hereinafter, from con-
ations of paper economy and labour-saving, to be
rred to by his school-name of Blinker), is unique
is kind. I suppose that he is truly representative
at there is at least one like him, cocksure and
acious, full of the news and eager to impart it—in
y compartment of our long train. Were it not so,
uld not announce him as the Voice of Public
nion; nor could I account so easily for the archi-
ure of the street in which Blinker and I "reside," as
kes to put it, being very particular in his choice of
uage. Raglan Gardens our street is called, and
e gate of every house but one is painted in Gothic
acters some romantic but not daringly original
e: as "Balmerino. No Hawkers." My gate is
ibed "Lindisfarne," but I cannot help that, as the
alternative was "Ecclefechan (No Circulars),"
h seemed to me to defy euphony, and, balking the
d-boy, thereby to exist in restraint of trade. Not
the tradespeople (who are requested to shut the
gate after them) ever use these names, whose
ose is served when the tenant is captured. On
ker's morning paper is scribbled, not "Secundera-
Raglan Gardens," but "48, Rag," and Blinker has
to speak to his newsagent about it.

* * * *

can never feel entire sympathy with the com-
t about "row after row of suburban villas, all as
tly alike as if they had all been turned out of the
jelly-mould." I frequently go out of my way
averse such rows. They are a rest cure after too
h Raglan Gardens and too much Blinker. A young
her-in-law, who before he went to the front was at
A.A schools and used occasionally to spend his
k-ends with us, was wont to apprise us of the
ending honour on a postcard addressed to "Rag-
Gardens." He said that the architect of those
ses must have been a most knowledgable man—an
ctic or polytechnic philosopher. No two of them
alike. In fact, they are all as widely dissimilar as
ncannily comprehensive acquaintance with all the
urces could make them. There are tiles of every
wn shape, slates of every discoverable hue and size
laid in every conceivable pattern; and when the
itect had exhausted the possibilities of these older
rings, he found a new field for his ingenuity by
ing to every possible use asbestos products of all
and patterns. To state in detail how the eleva-
s are varied would be impossible. Every material
wn to the builder's merchant has been conscripted,
has been employed in every conceivable way. "Balmerino" is half red brick and half pebble-dash, and has a round-headed porch projecting at the south-west angle. "Secunderabad" is tiled all over, and has a square-headed recessed entrance in the middle. "Ecclefechan" is rather reminiscent of Scottish Baronial, and its crowfooted entrance is round the corner. Some of the front entrances to these houses are at the back. "Lindisfarne" looks as if Norman Shaw and Mr. Voysey had disagreed early and often as to a proposed compromise and had finally abandoned the job to Satan and the Kaiser. At intervals you get a house that seems an attempt at summarising all the styles and all the materials of all the others. When my young brother-in-law first gazed on one of these compendious abstracts of architecture and building construction, he buried his face on my shoulder and wept. He sobbed out his intention of abandoning a profession of which all the possibilities had been exhausted at one operation. He has since joined the Army. These houses do not simply "break the sky-line." They smash it to smithereens.

* * * *

Not for worlds would I reveal the whereabouts of my suburban retreat. Such information might or might not be "calculated to be of use to the enemy"; but it would have a fatal influence on the national housing competition. Competitors coming here to avail themselves of the comprehensiveness of detail might end up by getting their ideas hopelessly confused and their taste irretrievably corrupted. For it would be subtly borne in upon them that this heterogeneousness, this profligate riot of variety, is exactly what the public wants. It is, for instance, a soul-satisfying joy to Blinker. He often says so. His admiration, however, is confined to the exterior effects. There is a canker in the rose, even in Ragtime Gardens. It was while in the train, commenting on the news with his customary breezy inaccuracy, that he suddenly revealed to me this inward grief. "By George!" he exclaimed, "here's a woman says you architects don't know your job, and I think she's right." "Cupboards, eh?" I murmured guiltily. "Cupboards nothing!" he said petulantly. "Shan't want any cupboards if this was lasts another five years. Couldn't get 'em if we did. No wood. No; this woman says you don't know how to plan houses because you don't have to do the domestic drudgery. She's only just found you out. Servants all gone. Has to do the chores herself. Knows now that the shelves are all fixed six inches too high, cooking-stove ingeniously placed to make her stand in her own light, doors full of rotten little quirks harbouring microbes you can't reach with a brush, larder pitch-dark, pipes all outside the house to make quite sure that they shan't miss the slightest opportunity for freezing, gas-pipes all leaky and smelly, chimneys all smoky, coals have to be mined out of a cellar as deep as a pit-shaft and lugged up to the top rooms in a scuttle that bumps against the newels and makes dints in the walls, which fall to pieces fast enough without this assistance, ceilings all cracked, taps and ballcocks a perpetual nuisance, doors and windows all misfits, roofs all leaky, wallpaper peeling off with the damp—— But you don't seem to be listening." "Heard it all so often before," I murmured. "How does the lady propose to cure it all, Blenkinsop? That's what I want to know." He glanced at his paper. "Well—er—as a matter of fact, she doesn't go into remedial details, but she seems to think that if we had women architects——" "Quite so," I said wearily. "This is an old, old story you are telling me, Blenkinsop, my dear man; and, to speak candidly, I am rather sick of it. For those cracked ceilings, and all the other items in the feminine indictment, the architect is no more responsible than Dora is for the phases of the "Hunny moon." He doesn't prescribe cracked ceilings and the rest of it in his specification, though perhaps he puts too much trust in the workmen, and relies too confidently on the honesty of the supplies. But, anyhow, where you find a house afflicted with all the diseases you have enumerated, and with a few more that could be easily added, you may, as a rule, feel quite confident that no architect had as much as a look in at the job." I was interrupted by the shrill pipe of a girl-porter singing out, like Mr. Grossmith's Muddle-Puddle Porter, "indistinctly but with unction, information that would doubtless have been valuable if we could have distinguished the burden of her complaint." "Wasshesayin'?" Blinker asked. "'Stronnery how in'stinkly these people articlate! Do we change?" "Not much, my dear Blinker, judging by the evidences." I thought he looked at me rather suspiciously. "No use listening to a woman," he said, rather crossly. "Apply that to domestic interiors," I said: "*good* morning."

DIOGENES.

THE PLATES.

Study for a District Office.

THIS study was prepared by Mr. Paul Waterhouse for an insurance company's district office, proposed to be erected in a pottery town. During the war, however, the scheme is necessarily held in abeyance. The intention of the design is to secure, without undue expenditure, an appropriate effect of architectural dignity; local materials—brick and dull-glazed terra-cotta—being employed throughout. It will be noted that the flanks are kept lower (by the height of a storey) than the centre, so as to avoid the unpleasant effect of a tall blank party wall rising above neighbouring buildings of lower stature. The original drawing was in this year's Royal Academy Exhibition.

Berkeley House, Rochester.

This house, obviously of the very late Georgian period, is an excellent example of its kind. In its extraordinary symmetry we may see how strongly the tradition of formalism, inherited from the seventeenth and eighteenth centuries, persisted in architectural composition during the early years of the nineteenth century. The only false note in this delightful house as we see it to-day is in the upper windows, from which, unfortunately, the original sash-bars have gone.

A Drawing of Great Malvern Priory.

The priory church of Great Malvern was first erected in 1085, but it was largely reconstructed in the fifteenth century. Sir Gilbert Scott "restored" the fabric somewhat extensively during the years 1860-1, at a cost of £11,000, and later, again, Sir T. G. Jackson was called in to remedy a serious structural weakness in the tower. A good deal of sympathetic restoration has also been carried out within recent times. The fabric in its main elements, however, remains as the Perpendicular builders left it; and the design as we see it to-day is the work of two centuries only—the eleventh and the fifteenth. The character of the priory and its surroundings is admirably caught in Mr. Edwin T. Hall's drawing, reproduced on one of the plates.

Wrought-iron Gate from the Villa Pisani.

The Villa Pisani, or Villa Reale, at Strà, lies on the banks of the Brenta, some seven miles east of Padua. Its erection, from the designs of F. M. Preti and Count Girolamo Frigimelica, was begun in the early part of the eighteenth century. The house is surrounded by elaborate gardens, intersected by alleys, or *clairvoyées*, which provide the occasion for a number of gateways of varied design. One of these is illustrated on a plate in this issue. The wrought ironwork of these gates is among the best of its period.

CORRESPONDENCE.

London Housing.

To the Editors of THE ARCHITECTS' AND BUILD
JOURNAL.

SIRS,—Thanks are due to THE ARCHITECTS'
BUILDERS' JOURNAL for its valuable work in secu
recognition for the merits of late eighteenth and
nineteenth-century architecture. From time to
illustrations and articles have appeared in
columns, and in this connection the names of Prof
Adshead, Professor Reilly, Mr. Ramsey, and
Richardson should be mentioned. As far back as
year 1910 Professor Reilly drew attention to the
ability for garden villages of the domestic archite
of the period in question, and Professor Adshead
demonstrated the faith that is in him by his able
successful work at Courtenay Square, Kenningto

The interest in this at-one-time-much-abused p
of domestic building is not confined to architects
We find that genial gossip "The Londoner" say
"I have come to look with affection at the subu
houses of this period; they have an air of house
comfort, houses built for men with whom the days
by quietly. From the Kennington houses, which
such dates as 1829 and 1833 on their corner-stones
clerk and the little merchant set out in the mornin
a walk to London and saw fields as they walked."

"Cities in Evolution," by Professor Geddes, con
some suggestive notes on these houses, and M
Richardson and Gill, in "London Houses," also
with them from an historical point of view. Thes
welcome signs, but we must confess to a desire t
this growing appreciation diverted into the more p
cal channel of giving these buildings a new leas
life. With this object in view, we have been at
pains to look into this question, and for a conside
time have been making a general survey of a
number of London districts.

In nearly all the inner suburbs of London ther
thousands of these houses, which have grad
deteriorated, partly owing to the rush to the outl
districts during the latter half of the nineteenth cen
and partly to the past neglect of the owners to a
them as they became vacant to meet the requirem
of other classes of the population. It appears al
have been one of the mistakes of social reforme
have encouraged house building on the outskir
London, and at the same time to have overlooke
effect of an inevitable exodus from the more ce
districts. They did not adequately realise that
the growth of new suburbs, and of increased trave
facilities, there would follow a rapid decline in the
of urban house property.

A means of changing this condition of things
need to be found, and we suggest that amongst
after-war problems of reconstruction should
included the question of the adaptation and conve
of these buildings to present-day needs. It is a str
anomaly that while so many ambitious ho
schemes are in embryo, thousands of quiet well-pr
tioned dwellings in the inner suburbs are going
bad to worse.

We are of the opinion that the remedy lies wit
large owners of such property working possib
co-operation with the public authorities in the dis
concerned. If one or a group of large owners (bea
in mind the present requirements in respect of
shortage of houses) could be encouraged to unde
the beginning of this work of resuscitation
owners would fall into line, and we might soon
these neighbourhoods taking on once more that a
well-being which they originally presented.

G. LL. MORRIS.
H. W. PARNACOT

HOUSING PROBLEMS AFTER THE WAR.*

BY PROFESSOR S. D. ADSHEAD, M.A., F.R.I.B.A.

(Concluded from page 216, No. 1193.)

does not seem natural that large communities should all be obliged to live in exactly the same way. There will always be two or more ses of operatives living in close proximity each other who can afford to pay more less rent. But there are many other points ch have a direct bearing on the question of the vision of parlours too involved to mention now, but ch I intend enlarging upon in another lecture. I ier wish at the moment to call attention to what are arded as minimum needs, and the accommodation he parlour does not come within that category. edless to say, the revival of interest in vegetable ure has very greatly stimulated the garden city rement. It is now recognised that every house- ler should possess a garden if not the added advan- e of immediate access to an allotment. And here y I advocate the inclusion of a comparatively new ure—namely, small allotment gardens for the older dren?

Site and Surroundings.

s regards site and surroundings, I do not think that he development of any housing scheme in the future n unbuilt-upon land there should be allowed e erected more than fifteen houses to the acre, uding roads, and this number only in exceptionally cult or confined sites. Eight or twelve should be more general rule; and no house should be built on d that has not been "town-planned."

ut by whom and under what circumstances they are e erected is a problem the solution of which is of amount importance to-day. First, then, let us look e closely into this question of how it is that houses not still be provided under the economic conditions prevailed before the war. I think it is generally reciated that the staple articles of diet—bread, ar, etc.—are nearly 100 per cent. dearer now than y were quite a short time ago; there is also a short- in these commodities. With a justifiable outcry inst profiteering, the working classes accept these es and pay them without complaint. It is conceded the shipper and food producer, who are labouring er most adverse conditions, are generally justified he rise in price which they demand. But the houses occupy were not produced under war conditions, therefore there is not the same justification for ing rents. But what of the new houses that are ently required? The cost of building material has n on an average to something like 80 per cent., the e of labour to a less degree. The cost of money risen also. Such sudden rises in the price of lding materials, labour, and money have not been wn in this country in living memory if ever before. houses, unlike bread and sugar, are not produced used daily; they last for several generations. ctuation in the cost of building in the past has not reciably affected rents; it has only affected the ply. With a high cost of building, building ceases, there is a tendency to overcrowding. This is what happened time and again, and this is happening v, but with the procedure aggravated to an extra- inary degree. Under normal conditions, the nation ld wait for houses until the cost of production had usted itself to the normal conditions of rent and ommodation. In short, the prices of materials and ur are secondary, and to a large extent determined the immobile rent. Rents of houses do not change reciably; people crowd until they are released by the building of more houses. But with the present unexampled conditions obtaining the nation cannot afford to wait with arms folded until the exigencies of an immediate demand can be met by the hopeless possibility of an early economic supply. It is essential that unexampled methods be adopted to overcome the difficulty. The mechanism of the economic housing machine has been rudely tampered with, and leverage is necessary to set it free. If the nation is to relieve the overcrowding that is prevailing, and that will intensify, and to provide those houses that are needful for the immediate carrying-on of its business, the nation must pay for it. The difference between the cost of a house producing an economic rent to-day and a rent that was economic yesterday, must be made up out of assistance from the State. Some advocate that there should be a contribution out of the rates. I do not think so. Liverpool pays a threepenny rate to be rid of her plague-spots, and other towns do the same; and in so far as housing is needed simply to re-house the occupants of insanitary areas, to that extent is re-housing a local responsibility to be paid for out of the rates, but the difficulty we are confronted with at the moment is largely an artificial one produced by the lack of any possibility of natural supply.

Now, if 500,000 houses are required immediately to make good the shortage, it is no easy problem to determine how and by whom they are to be erected, even with the financial assistance of the State. I think it is the accepted policy of the Local Government Board that, in so far as satisfactory arrangements can be made, the work is to be undertaken largely under the ægis of the local authority; also, with proper provision for security, by public utility societies and even private individuals.

Past Work of Private Builders.

Before the war 96 per cent. of the working-class houses in this country were erected as a business undertaking by private builders, and a very profitable undertaking it very often was, too. I could mention an authentic case where four-roomed houses with sculleries were built for less than £90, including land, and mortgaged for considerably more. The war has shattered that comfortable business, as it has shattered many other comfortable businesses, and there is no doubt it will take a considerable time to recover. But the building speculator can turn contractor; and, with less risks though possibly smaller profits, his special ability should enable him to do as well as he did before.

How Public Authorities Could Act.

I think it is understood that with State-aided undertakings there must follow a limitation of profits. That, I think, will be the essence of State finance. There are three ways in which local authorities could undertake building operations: (1) they could build themselves; (2) they could let the work by contract; or (3) they could employ the building organisation of a public utility society. I don't think that the first course of contracting in will be followed in any case. They will either contract out or make use of the services of a public utility society. Though I think that it would be well if in every case they were to purchase the land and lay out the estate, and construct the roads and sewers, I think that where the building of the houses is let by contract, designs should be prepared by the local authority, but always with the assistance of a specially qualified architect. I am aware that in many cases in the past some very

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onclusion of the first of a course of six lectures now being delivered ofessor Adshead at University College, London (Gower Street, W.C.1) uesdays at 5 p.m., beginning November 6.

good housing schemes, and also some very bad ones, have been prepared by the local surveyor; and although housing has become a specialised undertaking in which many surveyors have acquired considerable experience, and can undertake the carrying out of housing schemes with better results than many architects, at the same time, by their training, their success in such undertakings is generally the success which may be achieved by anyone who is sufficiently clever to succeed in any undertaking needing merely a little practical experience and the exercise of a certain amount of sound common sense. The more subtle points which are appreciated by the trained architect are overlooked. No; the architect alone is by training professionally qualified to design houses, and I think even the architect needs to be specially qualified for this work. I hope the Government will make it a condition of granting subsidies that the specially qualified architect assist in the preparation of all housing schemes, and this is a proposition to which I think the wisest of local authorities and their surveyors will readily agree. No one has been more hit by this war than the architect, and his services should be requisitioned here.

The public utility societies themselves, of whom about eighty have formed themselves into a committee, propose that there should be a central authority for all matters relating to public utility societies. They ask that this authority be a branch of a Government Department, and be empowered to exercise all functions relating to societies now performed by various departments. I do not think myself that it should be necessary even to go so far as to have a branch of a Government Department as a central authority; for, after all, the only difference between a public utility society and a local authority as media for the erection of houses is in the matter of security. It would seem impossible to define the statutory difference between the sincerely philanthropic organisation and the spurious imitation, and the formation of a special Government Department for this purpose would prove a needless incumbrance. I think myself that the excellent work of the Co-Partnership Tenants, Ltd., and of other less influential societies, deserves recognition, and they can well depend on their good name for public support. But in the eyes of the Government, who in the interest of the taxpayer can, after all, be only concerned in results and security, it seems to me the best way in which to overcome their difficulty in regard to providing loans and subsidies under the same favourable conditions as to local authorities would be to introduce the medium of insurance. For, after all, the weaker security provided by the public utility society, and also by the private owner, lies in the difficulty of estimating actual cost. Broadly, it may be said that whilst the estimate of cost of the local authority rests on open tender, that of the public utility societies rests practically upon approximate estimate. Hence the operations of valuing and certifying is more risky and more costly.

This is no doubt sufficient to justify the Government in withholding a moiety of 10 per cent. from the loan to a society. Now it appears to me that insurance companies with fixed rates could cover this uncertainty, and the payment of the insurance rates should be more advantageous to the society or private owner than the loss of the 10 per cent. moiety.

Amended Legislation Necessary.

Finally, one word on alterations and amendments to legislation that may be necessary. Apart from such legislation as will have to be enacted in order to provide for a new system of subsidy loans, there will have to be an amendment of the Town Planning Act and its regulations. Time will not permit me to go into this at any length, but it should be a condition contingent upon the granting of all subsidies and loans towards
housing schemes that the Town Planning Act b
in operation in the area of its authority. Brief
procedure will have to be simplified; more ju
power will have to be given to the local auth
Lengthy and elaborate procedure to guard ag
what experience has shown to be but theoretic da
will have to be abolished. Some general provi
provided for in the Act, but never yet framed, s
be set up, especially in regard to frontage line
limitation of buildings. This would have the eff
making the Town Planning Act in housing ar
regard to these matters compulsory, and, lastly
Town Planning Department at the Local Govern
Board should become more creative and less cr
and should have in its employ a body of trained ex
whose business it should be to consult with
advise the local authority. I do not think tha
planning of a housing area should depend upo
adoption of revised or special by-laws. Som
more than the advantages thus provided will be
to be necessary. Only the application of a
Planning Act to a wider area will ensure
consideration be given to the setting of the sche
relation to its surroundings, approaches, and
development, and secure that there will follow
sound structural growth upon which its future dep

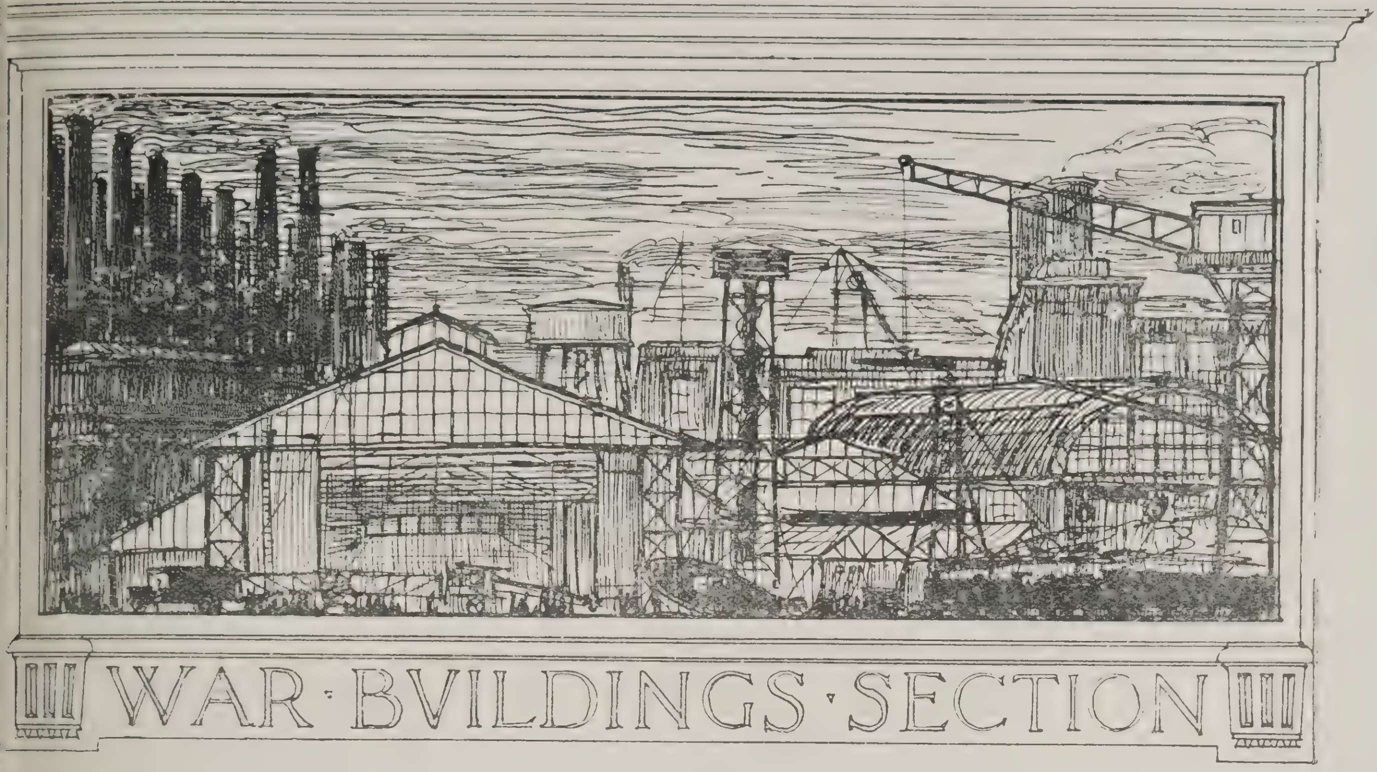
It is outside my competency to suggest
should be the terms of loans or subsidy, but
not need to be an expert in finance to see
whatever are the conditions of the loan, they s
be such as to wipe out the deficit between th
of erection under present or immediate condi
and, if rents were economic, what that cost
to be. And in view of the wide application
assistance, the terms should be explicit and s
I can foresee that the terms may be such as
immediate future it will be impossible for a
authority to take advantage of them without
Later, with the same conditions, they might
with profit. I think that the amount of the su
will have to vary with the cost of building
decrease periodically as the cost of buildin
clines. No doubt even in that case many
authorities will find that they cannot build w
loss.

But whilst, on the one hand, the State car
great deal to assist building by easy loans an
sidies, on the other hand it can do a great
towards the directing and controlling of m
and the cheapening of material. Especially
prevent from entirely degenerating such trac
brickmaking, steam joinery, and the product
concrete blocks and artificial stone.

But although the local authorities will no
be responsible for the erection of a great n
of cottages they cannot possibly supply all th
required. The most important organisations
the Local Government Board depend upon for
tance are the public utility societies, some of
work in co-partnership or on co-operative lines.

Difficulties of Government Assistance.

The principal difficulty which faces the G
ment in regard to providing financial assi
towards the undertakings of these societies i
of finding the security which in the case of th
authority is found in the rates. Whilst a
utility society can register under the Industri
Provident Societies Acts and must incorporate
thirty rules in its provisions including that im
a limitation on dividends, at the same time the
a thousand ways in which a bogus concern
it lays itself out to do so, make indirect
profits. It may appear that, provided it pr
the goods at the right price, it is no business
Government to inquire into ways and means.
we can very easily see how such methods
soon lead to very serious evils.



SCOTTISH HOUSING: SPECIAL REPORT.

;PECIAL report, forming part of the appendices to the evidence of the ıl Commission on Housing in Scot- , has been issued as a Blue Book, price shilling (H.M. Stationery Office, 23, ı-street, Edinburgh; Imperial House, sway, etc.). This special report, which been prepared by Mr. John Wilson, I.B.A., Architectural Inspector of the l Government Board for Scotland, with the design, construction, and rials of various types of small dwell- ouses in Scotland, and the Commis- issue it separately because they con- that it will be of assistance to Local orities and others preparing post- housing schemes. It is rendered ad- ıally valuable by the full specifica- which Mr. Wilson has drawn up, by the inclusion of several sheets of ıngs, some of which are reproduced ıges 228, 229, and 230.

sign C is one of four shown as being ɔle for cottage houses over the greater of Scotland where a gravitation -supply and drainage system are ıble. All these cottage houses can be in rows of four and six by placing oors and the windows shown in the walls on either the front or back .

. Wilson is of opinion that the build- f cottages in couples is the ideal ar- ment, as by this means access to the garden can be obtained at the side of ouse, but for purposes of grouping rrangement is not so satisfactory. A ıon pathway along the back of the s is not a desirable arrangement, as seldom possible to keep it free from nce of one kind or other.

ign G is one of those shown as being uitable for double-flatted houses over eater part of Scotland where a gravi- water-supply and drainage system ailable.

flatted houses are designed in of four houses each. This plan t be adapted to suit blocks of a r number of houses. It is difficult sign a satisfactory and economical plan of a block of more than four houses. If the number of houses is increased, then back stairs to the garden will require to be provided, and these, as well as front stairs, will in most cases require to be common to two tenants. An endeavour has been made in every case to make a house self-contained. Whenever any part of a house—a stair or washhouse—is common, then it is found that these tend to a lowered standard of cleanliness among the tenants as well as to friction between them.

Design G has an outside stair, which in many parts of Scotland is preferred to the inside stair.

Design J is a suggestion for the plan of a house for farm servants. It is intended that married farm servants should live in the two central houses, and the single men, who usually live in a bothy, should live in the end houses. By this arrangement the housewives in the central houses can do the usual household work for the single men. Possibly, in the majority of cases, two houses in place of four will meet all requirements. There may be some difficulty about this arrangement, as the wives of farm servants are usually expected to do a certain amount of farm work. Such arrangement would, however, tend to a higher standard of living and comfort among the single men than at present obtains when the bothy is a separate building. The bothy system is fairly common in Scotland, except in the southern counties, where the single men are housed in the farmhouses.

Design K shows the plan of a house suitable for smallholders and crofters. Where there is no gravitation water-supply, an earth-closet will require to be provided apart from the house. A tank for rain-water may also require to be provided and connected to the sink for washing purposes. The provision of buildings for cattle, etc., has intentionally been omitted as not coming within the scope of this report.

Designs L and M are suggestions for the plans of one-apartment houses. These are not desirable houses for families, but are suitable for such cases as, *e.g.*, an aged couple, a single woman, or a woman and young child, who do not need and are not able to pay for larger accommodation. This type of house may be called a hostel, and, as stated above, is only suitable for certain cases. In each house there is a large living-room, with a small scullery, coal-place, larder, and water-closet. Where there is no gravitation water-supply an earth-closet will require to be provided outside the house. In the back garden a common washing-house is provided, and a roofed shelter for ash-bins.

In designing all the types of houses an endeavour has been made to provide the necessary accommodation to enable people to keep their houses wholesome and tidy. At the same time, advantage has been taken of every foot of space, even to the omission of the usual passage from the front entrance to the scullery. The elevations have been kept simple, although these could be improved by a little extra expenditure.

The Planning of Houses.

Considerable economy and convenience of arrangement can be effected in planning a house by giving careful consideration to every detail. By concentrating sanitary and water fittings, a saving can be effected in capital expenditure and maintenance. By arranging the position of beds and furniture on the plans, convenience of arrangement can be attained.

The door to a bedroom should be so placed and hung that the bed is covered and protected from draught when the door is opened. The doors in a living-room or kitchen, which may adjoin another room, should have these so placed that the passage-way is confined to one end of the room. Staircases should be so planned that the unnecessary height of ceilings often found in small houses can be avoided.

Those who have made a study of the planning of small houses for artisans know how difficult it is to eliminate the wastage in the areas and so reduce the cubic contents of the building. It should always be remembered that as a room or house approaches a square on plan so does the cost decrease. The house that is narrow-fronted and deep on plan may have the same length of walling to enclose it as that enclosing a house which is practically square on plan, but the former has about 25 per cent. less floor area than the latter.

The various apartments that are necessary in a house are dealt with as follows:—

Living-Room.

This room is the one in which the family will principally live, and it should be given the chief consideration in planning. A south or south-east aspect should be obtained in order that the room may have the morning sun. Where this is not practicable, a west aspect is the next best in order that as much sunshine as possible may be obtained. Where a northern aspect cannot be avoided, the living-room should be a through room with a window to the south. The minimum size of room is 168 superficial feet of floor space, and it should be regarded as the smallest in which family life can be carried on without overcrowding and discomfort. The convenience of a living-room depends principally upon the arrangement of the fireplace, window and doors.

The fireplace should be placed on a wall at right angles to the window, so that the housewife may not stand in her own light when cooking. The doors to and from the living-room should be so placed that the passage-ways from one room to the other should not interfere with the sitting space round the fire. Pass doors on either side of a fireplace are most inconvenient.

The room should be rather longer than its width, and the size which gives 168 sq. ft. (14 ft. by 12 ft.) will be found of a satisfactory shape.

A cooking range should be provided in this room. Some of the latest combinations of cooking range and low fire with boiler for hot-water supply attached have been found satisfactory.

Scullery.

In small houses for artisans it has not been usual in the past to have a scullery. The living-room or kitchen was provided with a sink, and all the dirty household work was done in this room, with the result that it was found difficult to keep the room clean, tidy, and wholesome. It is essential that every house should have a scullery; in the scullery all dirty household work can be done, and the living-room kept clean and tidy for family life. The scullery should be planned so that the doors can be kept at one end in order to give working space round the sink. The scullery should open from the living-room, as it is essential that a mother should be able to keep her children under observation while she works there. The aspect is not of so much importance as that of the living-room, but, where possible, it should be placed to face north-east or east. The washing boiler can be placed in the scullery against the internal gable wall, which contains the flues from all the fires in the house. To avoid the escape of steam into the scullery, an arrangement can be provided to take it into the flue. A glazed earthenware sink should be placed in the scullery with a draining-board on one side. Where gas is moderate in price tenants sometimes prefer a gas washing-boiler to an ordinary washing-boiler. The former is more cleanly to use, but where coal is easily obtained the latter is preferred by the majority of tenants.

In England it is usual to provide a small cooking range in the scullery, but in Scotland it is the practice to have a fire continually in the living-room, and cooking is always done on this fire. The Scottish housewife will not keep two fires bur
so it is useless to provide a fireplace i
scullery. It is of advantage, howeve
provide a space for a gas cooking-sto
the scullery, as some housewives d
this arrangement for use in sun
months. The scullery should not be
so large as to encourage it use as a li
room.

It will be found convenient if a
part of the court or yard outside the
door is paved with cement, brick,
stones, or tar macadam.

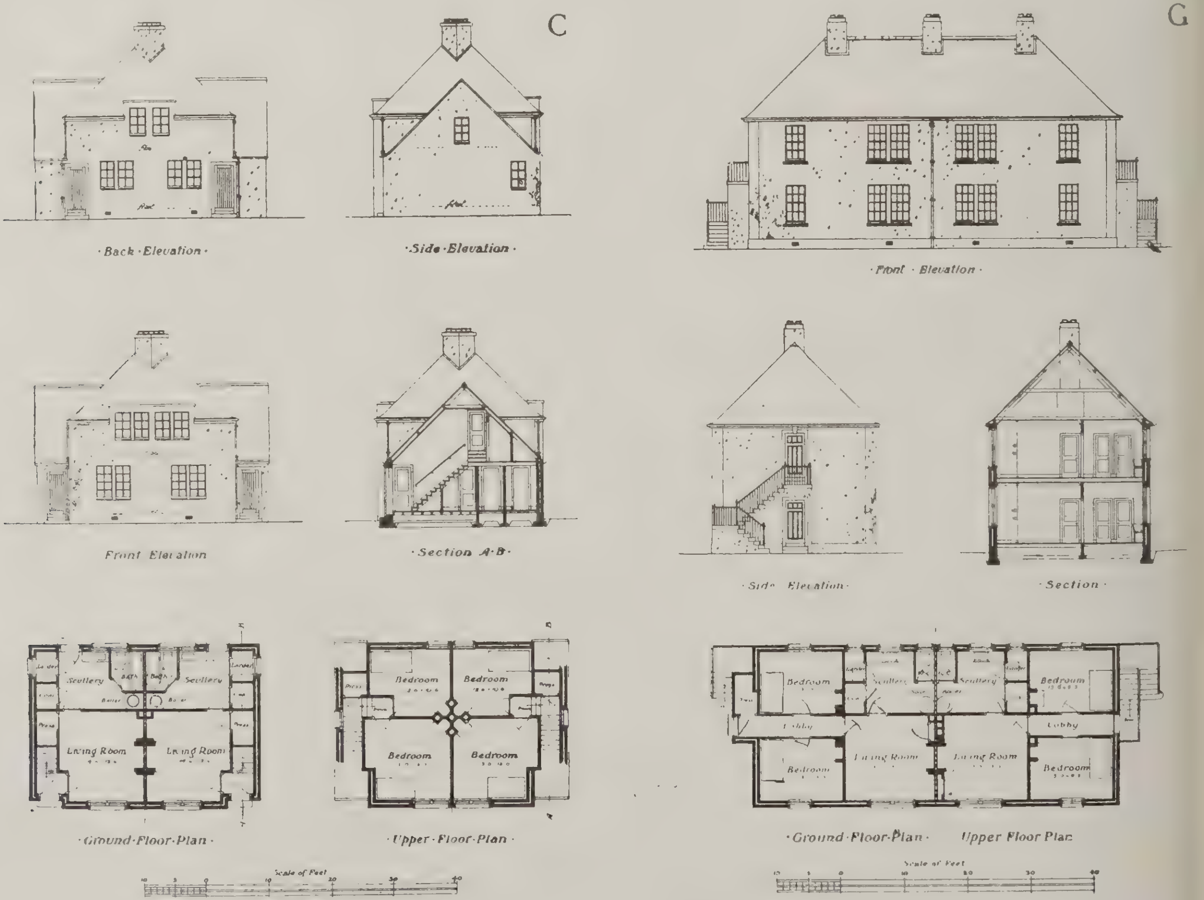
Baths, Water and Earth Closet

There is an increasing demand for
by the tenants of small houses, and
the standard of living demands it,
may be provided. In England it is
tomary to place the bath in the sc
with a hinged table-top to cover it.
this arrangement no privacy is secur
the scullery is constantly in demand
people are thereby deterred from usin
bath. Further, the table-top on the
is so handy for placing dishes on
rather than be troubled removing
the people refrain from using the
The bathroom may be a separate
ment, and entered from the scullery
water-closet may also be placed in
apartment. A hinged metal ring fix
the wall at the end of the bath for a
able basin will be found a convenienc

Where there is no gravitation sup
water only an earth-closet can be pro
This can be placed in a small outhou
tached from the house. There are va
types of automatic dry-closets or
market which, with proper ventil
have proved fairly satisfactory. Th
closet is, of course, very often used.

Larder.

A larder is required in every hou
storing food-stuffs, and the space al



TYPES OF SMALL HOUSES IN SCOTLAND.

vary from 12 to 15 superficial feet. larder should always have a window e outside for proper ventilation, with, ssible, a north or north-east aspect. A den frame covered with fly gauze ld be fitted into the window opening ide the window frame. A stone or shelf is of great service in the larder. larder should be entered from the ery. It is sometimes placed under the , and entered from the living-room, this should be avoided if possible, as uently it is difficult to ventilate in this ion.

Coal or Fuel Store, etc.

is store should be entered from the ery, and be placed as near the back as possible. In country districts, re coal is scarce and peat or wood is uently used, it will be found more convent to keep the fuel in a wooden shed e back garden, and under the same as the earth-closet. It is also desir- to provide space for garden tools, cles, and perambulator in a shed in the garden. In small fishing villages a is required for the storage of nets, gh in larger villages and towns it is l to have a large central store for mon use by a number of fishermen.

Ash-Pit.

rural districts where there is no regu- ollection of household refuse it will be sable to provide a small ash-pit in the garden. It can be formed of con-, and should be roofed in some simple ner and capable of being easily tied. In places where the intervals of ction are short a large covered iron in will be more suitable than an ash-

Staircase and Lobby.

e staircase should open off a small y placed at the front door. It should not be necessary to enter the living-room for access to the staircase. The steps of the stair should not be steeper than 7 in. risers and 9 in. treads, and, if possible, wheelers should be avoided. The stair should have a width of at least three feet. The top of the staircase should be well lighted and ventilated by means of window or roof light. A handrail should be fixed to one side of the staircase wall.

Bedrooms.

In cottages the size of the bedrooms is governed by the size and number of the apartments on the ground floor. In flatted houses there is no such restriction, as all the rooms are placed on one floor. Though a standard of cubic space is necessary, the habitability of the room depends as much on floor space and efficient ventilation. The statutory powers contained in the Burgh Police (Scotland) Act, 1903, demand 400 cubic feet for each adult and 200 cubic feet for each child under ten years of age. It is suggested, however, that the higher standard of 500 cubic feet for each adult, and probably 375 cubic feet for each child under ten years, should be obtained. Where there are only one or two bedrooms in a house, the floor area should be not less than 125 sq. ft., and, where possible, this should be larger. Where there is a third bedroom it may be smaller, but should in no case have less than 500 cubic feet. In planning bedrooms it will be found that a room of an oblong shape is much more serviceable than one of a square shape. In the former a more convenient space for dressing purposes will be found. The room should be so planned that the bed can be placed out of the draught from the window. There is no objection to the door being placed near the fire, but it should always be hung to cover the bed when opened. Where possible, a hanging wall-press for clothes should be provided in each bedroom, but where this is not possible, a hanging cupboard can be formed in a recess or corner by means of a curtain.

Parlour.

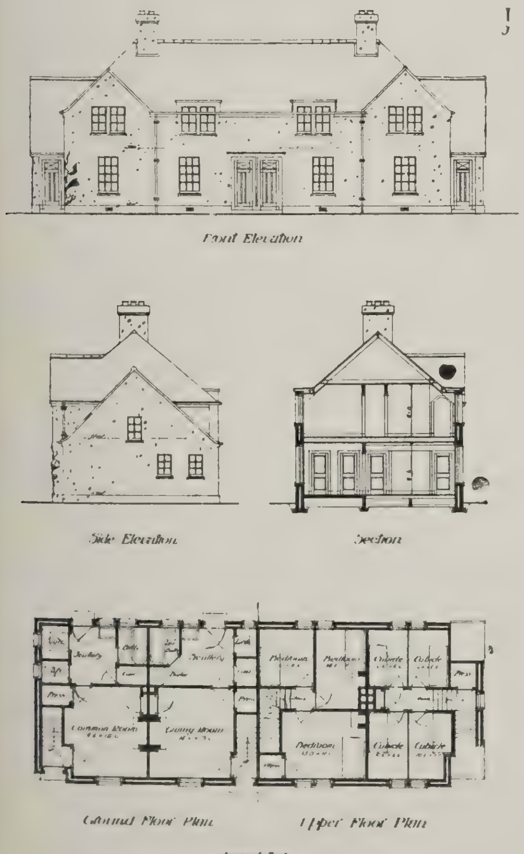
Where there is a demand for a parlour it may be advisable to provide one, but only in a house of two or more bedrooms. A parlour, however, is only put to occasional use in the majority of cases, and where there is need for economy it can well be dispensed with. As a parlour is of less importance than a living-room, the size and aspect need not be given the same consideration. It is of importance, however, to plan this room with the door, window, and fireplace in proper relation to each other, so that the space around the fireplace is free for sitting use.

Press Accommodation.

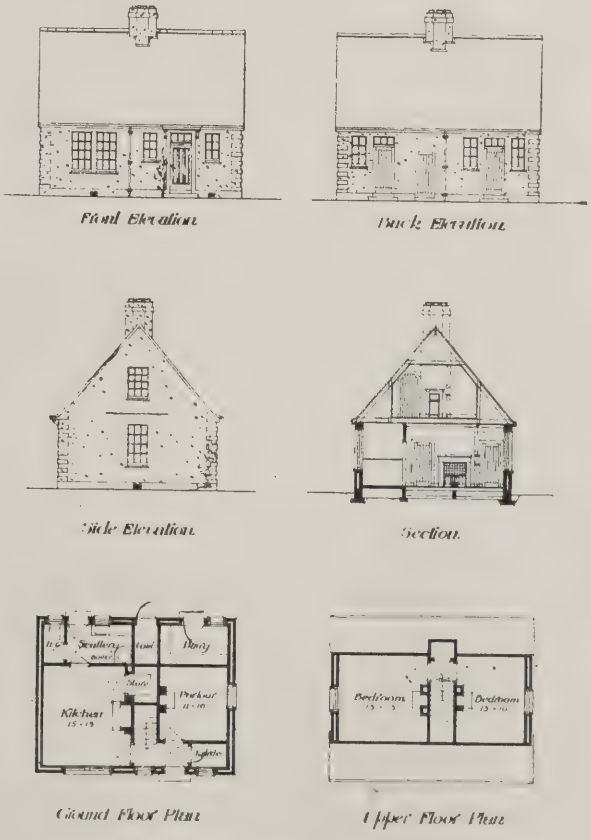
Presses should be provided wherever practicable in order that rooms may be kept as tidy as possible.

To this extremely valuable report full structural details are appended, as well as specifications, bills of quantities, and schedules of cost. These should be consulted in the report, which should be in the hands of everybody interested in housing. It is in every respect a model document of its kind. In saying this, we of course refer to the minute care and the patient thoroughness with which it has been prepared. Agreement with all the recommendations in it is by no means implied. It will be seen that some of them rather clash with English opinion, practice, and social conditions. To take a single instance, it is obvious that Mr. Wilson is but a lukewarm advocate of the parlour—an institution that, as will be inferred from an editorial note in the present issue, we cordially support.

J



K



TYPES OF SMALL HOUSES IN SCOTLAND.

LEGAL.

Building By-laws : Legal Construction.

Governors of Repton School v. Repton R.D.C.

November 7. King's Bench Division. Before Mr. Justice Bailhache.

This was an action by the plaintiffs claiming an injunction to restrain the defendants from pulling down, removing, or otherwise interfering with the addition to the defendants' house, and the case raised the question whether one of the Local Government Board's model by-laws was valid.

Mr. Hudson, K.C., and Mr. Inman appeared for the plaintiffs, and Mr. Talbot, K.C., and Mr. M. M. Macnaghten for the defendants.

The facts were as follows: In 1916 the plaintiffs desired to make certain alterations in one of the school boarding houses, including an addition to the house of a projection three storeys high, with a room on each floor. In August, 1916, the alterations were begun, without the deposit of any plans with the defendants, the local authority. Plaintiffs, however, deposited plans upon a demand by the defendants. In September of the same year the defendants resolved that the plans should not be approved of, as the addition did not comply with By-law 12 of the defendants' by-laws as to the provision of open space in the rear of new buildings in respect to the erection of a "new domestic building." By-law 1 defined a new building as meaning "a dwelling-house or an office, building, or other outbuilding appurtenant to a dwelling-house whether attached thereto or not." Plaintiffs' deposited plans were in all other respects in accordance with the defendants' by-laws. Plaintiffs said that their alteration consisted of an addition to the front of an existing building, and it was therefore impossible to provide an open space in the rear as demanded by the by-law, and they therefore proceeded with the alterations and additions. In December last defendants served plaintiffs with a notice to show cause why the addition should not be demolished, and plaintiffs then commenced these proceedings.

Mr. Hudson argued that By-law 12 relating to the provision of an open space in the rear of new buildings was in this case unreasonable and ultra vires. The by-law was one of the Local Government Board's model by-laws of 1887, and was adopted by defendants in 1902. It was also contended that the by-law was void under Section 23 of the Public Health Acts Amendment Act, 1907.

His Lordship, after hearing legal arguments, gave judgment for the plaintiffs, holding that the by-law had become unworkable and unreasonable as preventing an owner of property from doing what he ought to be able to do. He came to the conclusion that since the passing of Section 23 of the Act of 1907 the by-law had become unworkable and must therefore be revised. He gave judgment for plaintiffs, restraining the defendants from pulling down the addition to the house.

Unsuccessful Claim against an Architect.

Reece v. Mayor.

November 7. Liverpool Assizes.

Mr. James G. Reece, coach and motor builder, Liverpool, claimed damages from Mr. C. K. Mayor, a Manchester architect, for alleged negligence in the construction of a garage of which Mr. Mayor was the designer.

Counsel for plaintiff was Mr. Sylvain Meyer, K.C., and Mr. Procter and Mr. McCleary represented the defendants.

Mr. Meyer explained that plaintiff was a motor engineer carrying on business as J. Blake and Co., and that defendant prepared plans for a new garage for the plaintiff in Blackfriars Road, Salford. The building was to be completed in four months. The contract was signed in March, 1914, and in July of that year the plaintiff went into occupation. The defendant architect gave a final certificate, and the plaintiff paid the contractor £3,058, of which the architect received £188, but almost immediately the roof began to leak, and voluminous correspondence ensued, but the contractor refused to do anything more to the building. The plaintiff alleged that the asbestos tiles with which the roof was covered were unsuitable for the purpose, and that the flushings were not properly constructed. It would require an outlay of £96 to put the roof into a watertight condition, and that sum, together with fees for another architect's advice, constituted the claim.

The defendant denied negligence, and pleaded that the tiles were neither bent nor brittle as alleged, and th cause of the leaking roof was in the g getting clogged. Similar tiles had used on many other buildings and had been no complaints.

His Lordship said he was satisfied evidence that the leaking of the roo not due to any negligence on the p the defendant, but occurred becau gutters were not kept clean by pla Therefore judgment would be for th fendant.

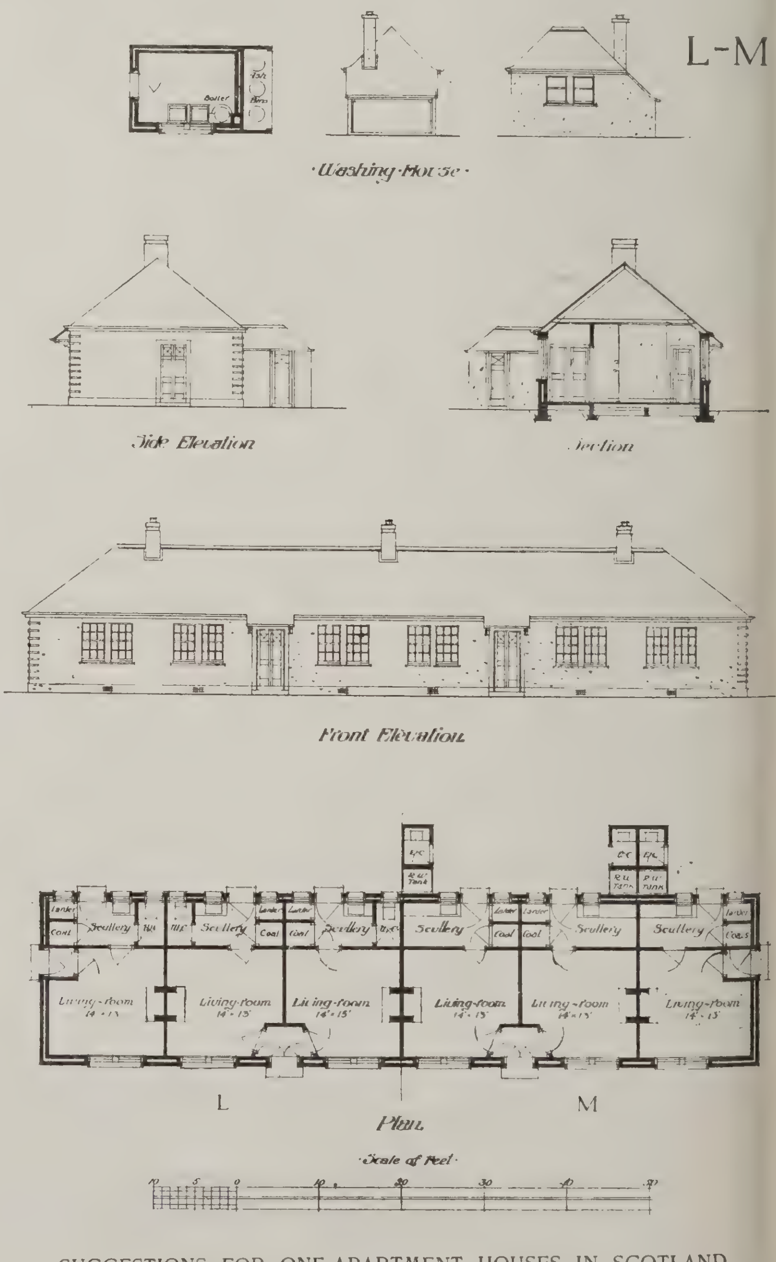
NEWS ITEMS.

Change of Address.

Mr. A. Marshall Mackenzie an A. G. R. Mackenzie announce th from October 31, their address is 1 Leonard's Terrace, Chelsea, S.W.3. phone number 3070 Victoria, as previ

Society of Architects' Assistant Sec Wounded.

News has been received that P W. E. Wanmer, Artists' Rifles, ass secretary of the Society of Architect been severely wounded in action by and is in hospital in France.



SUGGESTIONS FOR ONE-APARTMENT HOUSES IN SCOTLAND.

(See page 227.)

EWS ITEMS—*continued.*

Death of M. Rodin.

Auguste Rodin, who died on Satur-
st at the age of seventy-six, was un-
onably one of the greatest sculptors
time. Some particulars of his life
work will appear in next week's

Law Courts as Raid Shelter.

Douglas M. Gane, of Leadenhall
, has received a letter from the Com-
ner of Police stating that arrange-
have been made for the Law Courts
available for shelter during air raids
lay and night. Mr. Gane points out
t is not the actual courts that will
of use, but the innumerable
ors.

Partnership Notice.

srs. Cossins, Peacock, and Bewlay
rry Peacock, F.R.I.B.A., and Ernest
wlay, F.R.I.B.A., architects, 83,
re Row, Birmingham) announce that
N. Cooke, carrying on practice as
hitect at 117, Colmore Row, but at
t engaged on military duties, has
them in partnership, and that the
ill in future be known as Peacock,
y. and Cooke, with offices at the
address.

Dome of the National Museum, Cardiff.

ng to the scarcity of metals, the
ity frequently arises of finding sub-
s for use on work which cannot be
d. The dome of the National
m of Wales at Cardiff has been
vatertight with a rendering of water-
d cement as a temporary measure.
the war is over it will be covered
ead as originally intended. The
cts (Messrs. Smith and Brewer)
hat the Pudloed cement rendering
ved quite satisfactory, which again
hat the uses of waterproofed cement
ny and varied.

sing of St. Olave's, Southwark.

e is given, by advertisement in
Times," that application will
de in Parliament in the ensuing
for an Act to appoint trustees to
into effect the closing, disuse for
service, sale, and demolition of the
of St. Olave, Southwark—"the old
"—with its site and the vaults,
yard, rectory house, and gardens.
on is made regarding church orna-
fittings, and archives, for the re-
of human remains, and for the ex-
of the incumbency and advowson.
lter Besant's "London" describes
rch as an historical monument of
hest interest, built and dedicated
e life of St. Olave, the Danish king
rtyr, was still remembered by the
of London. This dates the church
-Norman.

Rural Architecture.

J. Seymour Lucas, R.A., has pub-
the following letter in "The
: "A certain amount of interest has
roused by the proposals for the
eeded housing scheme in contem-
for the rural population, in view of
icultural revival. With these pro-
n view, may I be allowed to voice,
the medium of your valuable
growing feeling among artists and
ts that the scheme, unless carefully
, may result in buildings of a mon-
nd ugly character, such as are so
en in the 'Black Country'? There
an opportunity of avoiding such a calamity, for there is no reason why buildings in harmony with the landscape and existing old buildings should not be erected and yet be inexpensive and hygienic. Many of the picturesque cottages, also, I am certain, are capable of being economically restored and adapted under sympathetic treatment to modern requirements. England, above all countries, is noted for the beauty of its villages, a beauty that is quite peculiar to this country, and the possibility of long rows of slate-covered monstrosities defiling all that is beautiful and home-suggesting is sad to contemplate."

Large Factory Buildings for Burton.

At a special joint meeting of the Burton Town Council and Commercial Development Committee, Councillor T. Jenkins (chairman of the Development Committee) stated that for the last four months negotiations have been proceeding with various Government Departments, and after innumerable interviews with officials, visits, and inspections, extending over the whole period of four months, the Government Department directly concerned has agreed to take a site and erect large factory buildings. The industry to be carried on will be of a permanent character, the factory will give employment at the start for about 2,500 skilled workers, and the work of building commenced immediately, the contract having been placed with Messrs. Thomas Lowe and Sons, of Burton. The establishment of this industry in Burton will result in a large increase in the output of electric power, the extension of the tramways, and necessitate the erection of a number of good-class houses for officials.

The Architectural Association of Ireland.

Mr. Edwin Bradbury, F.R.I.A.I., presided at a meeting of the Architectural Associaton of Ireland, held at 15, South Frederick Lane recently. The President, in the course of his inaugural address, said the Association, in common with other societies, was struggling against the difficulties which were the outcome of the disorganisation engendered by the war. Many of their members—a very respectable portion, indeed—were now on active service in their ranks. They had been able to take part in a higher service. It was their part to keep the home fires burning. They should help to keep flying the flag of humanity, and to carry on the work of the Association until such time as those now on active service could rejoin them. The President then proceeded to read a paper on "Rational Architecture," in which he pointed out that it was demanded of architects that the buildings they designed should possess architectural character or beauty as well as being soundly constructed, properly ventilated, heated, and lighted and sanitary. They had no use for foppish architecture, which attempted to cloak ill-conceived and impractical work, or fundamentally wrong design, beneath expensive and overdone ornament. The impact of nations had torn aside the frivolities, the petty thoughts of men and of peoples, and had revealed, as never before all that was bad and all that was good in mankind. From out of the strife would surely arise a new world of purity and truth. Architects must, in their appointed places, labour to produce what was valuable and useful and what was beautiful in the deepest and truest sense. They should endeavour to produce a rational architecture which excluded unessentials and which embodied only what was true and of unassailable worth.

A.A. MEMBERS SERVING WITH THE FORCES.

The following particulars are taken from the current issue of the "A.A. Journal":

Names of members serving are published as information is received, and not according to date of enlistment. The total to date is 564.

Officers.

Falkner, Harold, Second-Lieutenant, Royal Flying Corps.

Mackenzie, F. W., Lieutenant, Middlesex Regiment.

Pritchard, I. M., Lieutenant, Royal Garrison Artillery (Pembroke).

Woodward, Charles, Second-Lieutenant, Army Service Corps.

Woodward, Frank, Second-Lieutenant, Royal Engineers.

Private.

Priest, F. R., Royal Naval Air Service.

Promotions.

Benslyn, W. T., from corporal to second-lieutenant, Royal Engineers (Signal Section).

Davis, H. Stratton, from second-lieutenant (acting-captain) to acting-major, Royal Engineers Field Company.

Durnford, W. J., from Royal Army Medical Corps to second-lieutenant, Wilts Regiment.

Hayward, Arthur B., from Lieutenant and second in command, Machine Gun Company, to acting-captain, and O.C. Machine Gun Company.

Military Honours.

MILITARY CROSSES.

Second-Lieutenant William James Leahy, R.E.

"For conspicuous gallantry and devotion to duty in charge of working parties. He rallied them under heavy fire, and by his personal courage and determination kept them at work until the two strong points upon which he was engaged were completed. He displayed great fearlessness and boundless energy."

Lieutenant Vincent Newton Moss, East Kent Regiment.

"During a raid he led his party into the enemy support line, where he remained three hours reorganising them after heavy casualties. Although wounded, he personally supervised the repulse of a bombing attack, and remained to the last, finally withdrawing his party without further loss."

Captain Basil White Ridley, South Lancashire Regiment.

"For conspicuous gallantry and devotion to duty in carrying out daring reconnaissances during an attack. He obtained and sent back valuable information at a time when communication was exceedingly difficult, and he showed exceptional coolness and initiative under fire."

Lieutenant H. A. Gold, brigade bombing Officer.

Lieutenant Gordon Leith, R.F.A.

R.I.B.A.

The subject for discussion at to-morrow's informal conference is "The Function of an Architectural Society." The opener is Mr. Sidney Webb, and the chairman Mr. Henry T. Hare.

PUBLISHER'S ANNOUNCEMENT.

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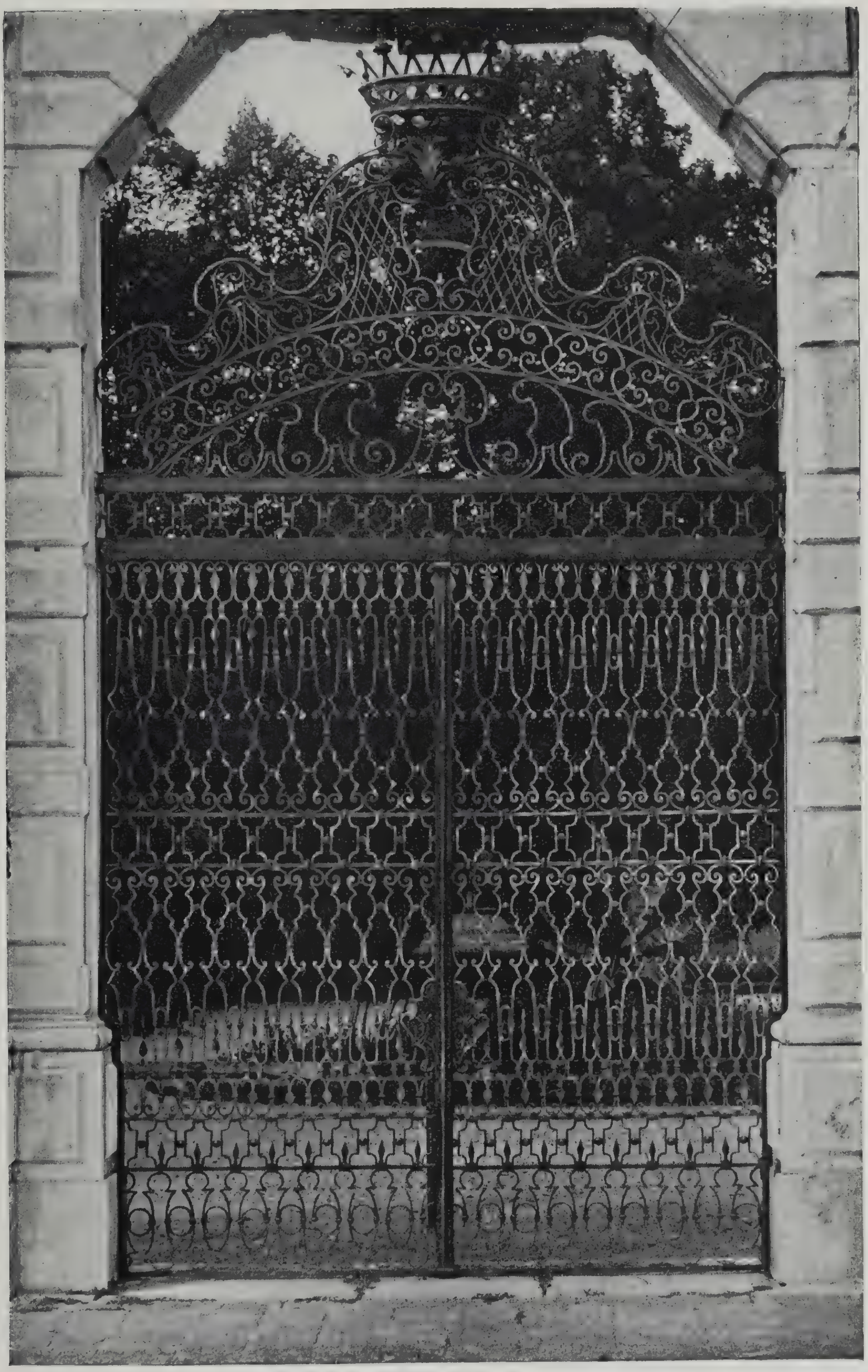

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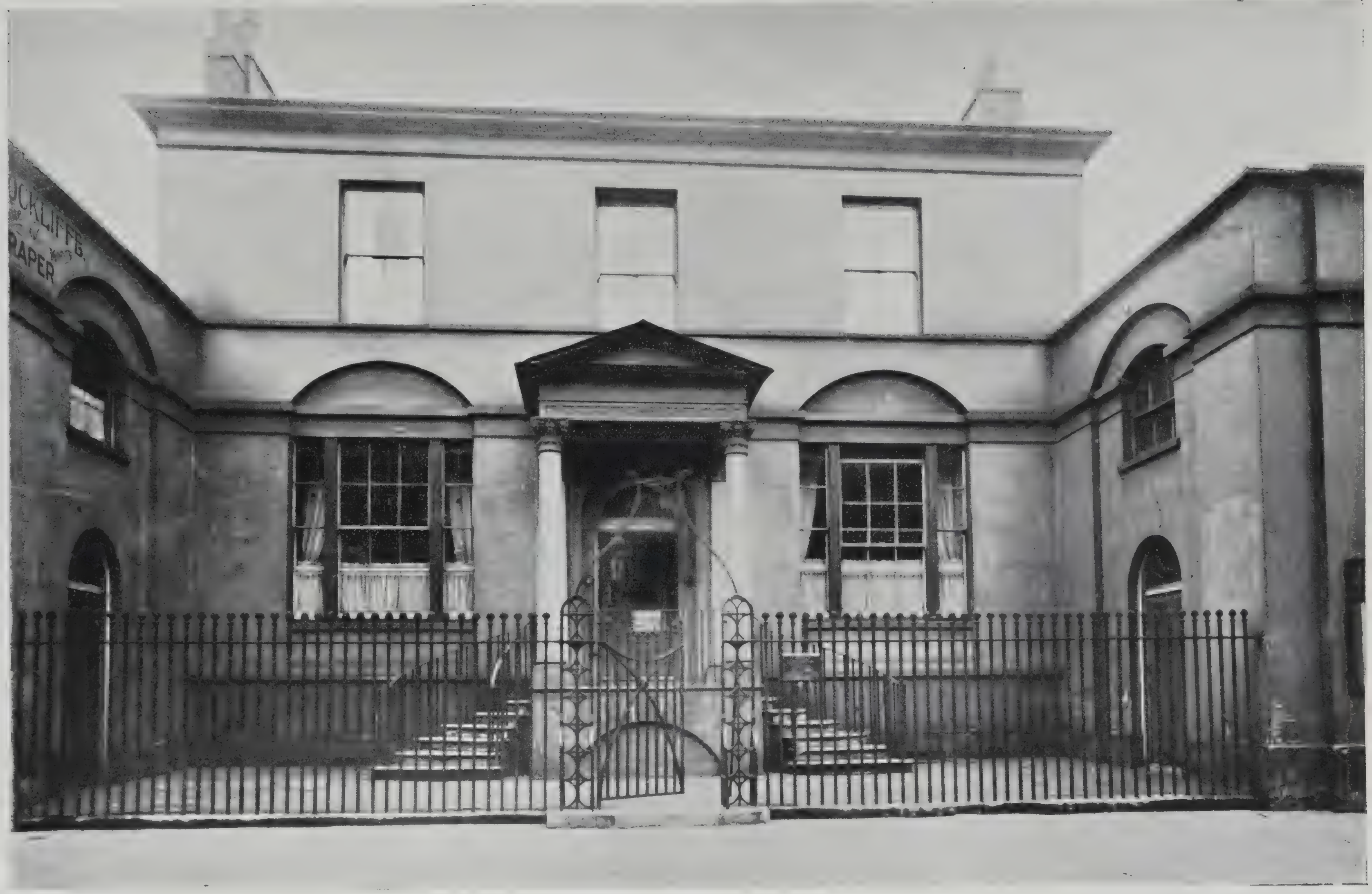

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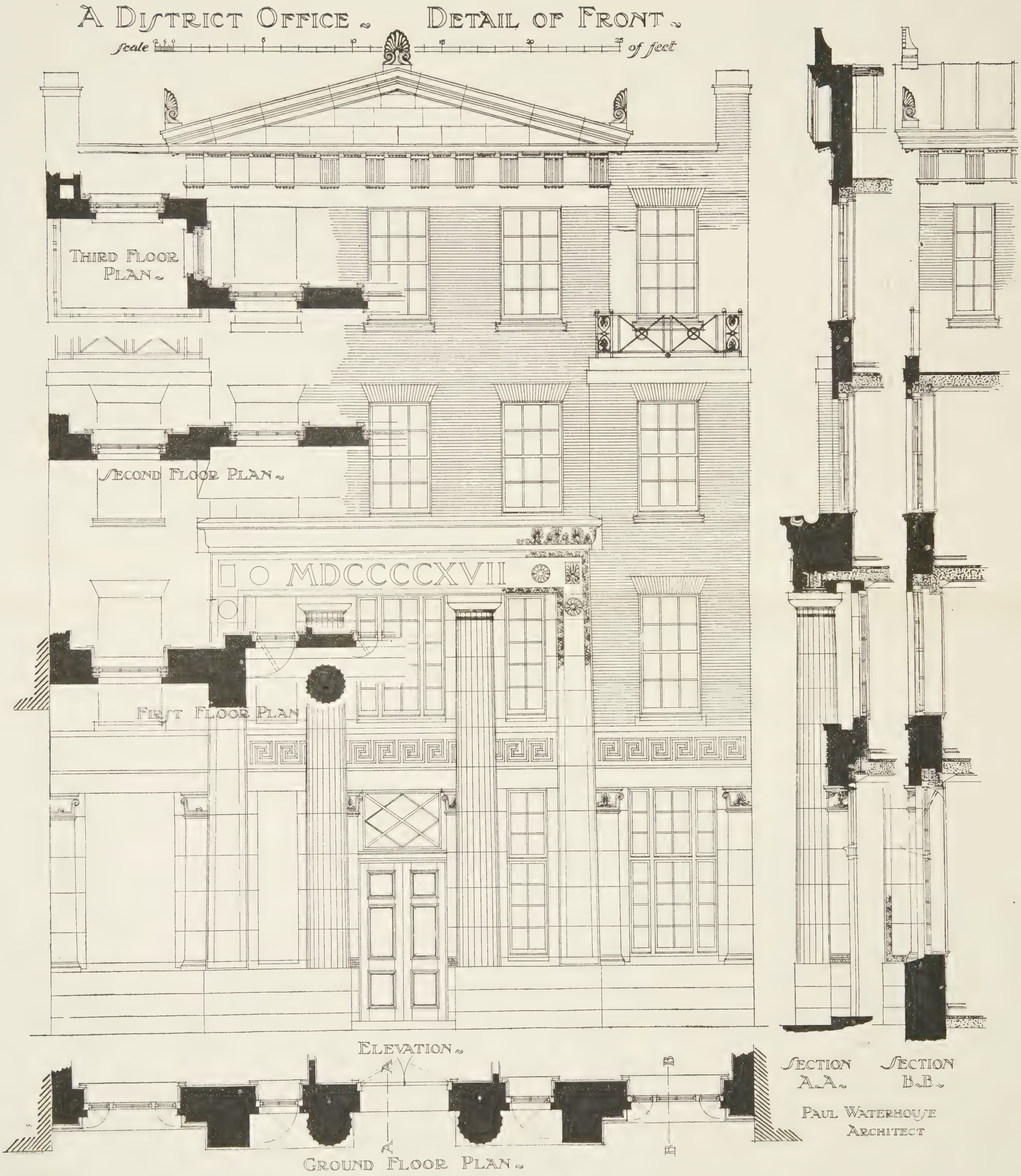

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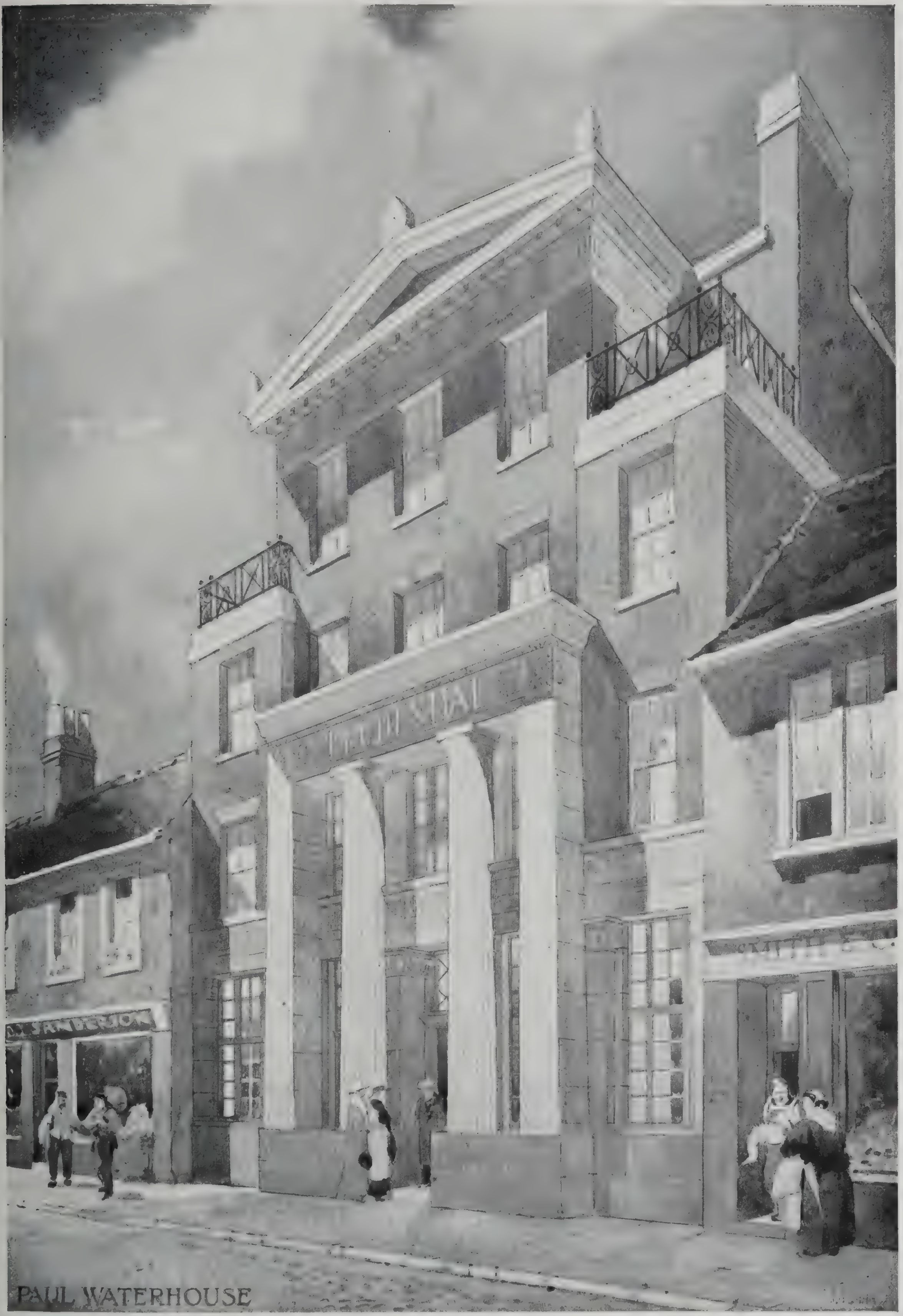

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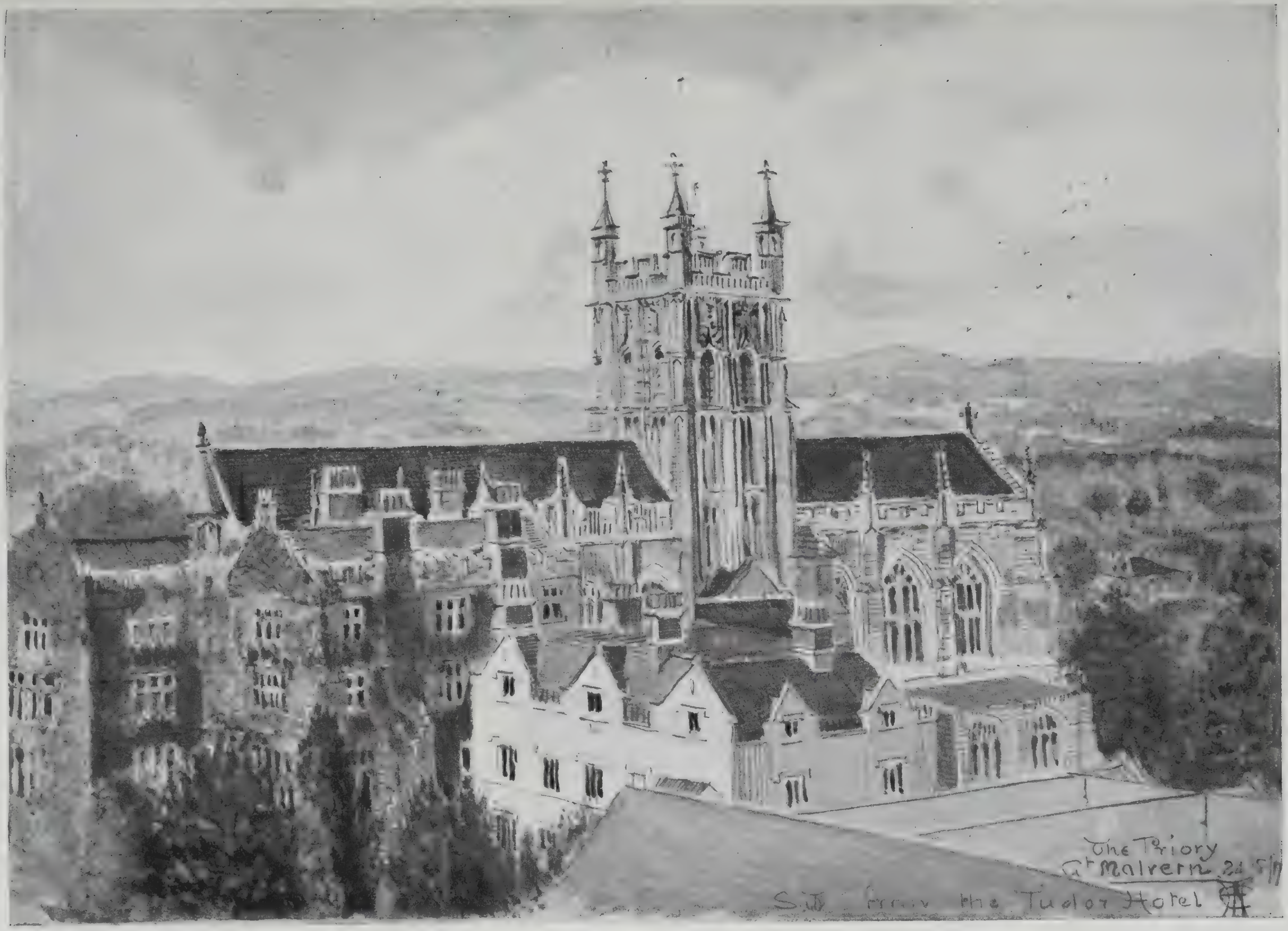

ARCHITECTURAL DRAWINGS AND SKETCHES. VIII.—THE PRIORY, GREAT MALVERN.

BY EDWIN T. HALL, F.R.I.B.A.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

NOVEMBER 28, 1917. TOTHILL STREET, WESTMINSTER. VOLUME 46. No. 1195.

NATIONAL PAPER ECONOMY.

ng to the very necessary Government restric-
n paper supplies, all elements of waste must
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a serious discrepancy between supply and
d, and cause a wastage of effort and materials
ould obviously be reduced to a minimum but
sual and erratic purchasing.

---

case heard in the King's Bench Division of the
igh Court of Justice on November 7, and
ported in last week's issue, an absurdity of the
by-law as to air-space was fully revealed. The
nors of Repton School built an addition to the
of one of their boarding-houses. Repton Dis-
ouncil served a notice to show cause why the
n should not be pulled down, and the governors
to the High Court for an injunction to restrain
uncil from interfering. Mr. Justice Bailhache,
vering judgment, put a luminous imaginary case
use surrounded by a park of 30 acres; supposing
ner wished to enlarge his dining-room by pro-
it in front, then that projection would be a new
g, which would not have the requisite air-space
rear as required by the by-law. "He could see
son for such a by-law, and he must hold it to be
onable, as preventing an owner of property from
what he ought to be able to do." He thought
nce the passing of Section 23 of the Act of 1907
-law as to rear-space had become unworkable,
ould be revised. He therefore gave judgment
he Council should be restrained from pulling
the addition to the boarding-house. This case
es the sort of specific instance for which a certain
rious writer to the Press is constantly clamour-
Whenever a general reference is made to the
lity of the by-laws, this gentleman remonstrates,
allenges proof. It is not always convenient to
e proof. Here, however, is an instance that can
luced without prejudice, and without any sort of
acy. Thoroughgoing championship of the
s is very pretty; but the inferential claim that
re infallible is, on the face of it, rather ridiculous.
any, if not most of them, are based on the Model
s prepared forty years ago, and that fact is of
significant that the constant complaints of
ly and obstruction are probably only too well
ed. In forty years there must have arisen many
nditions which the old by-laws do not meet.

* * * *

t is surely a most reasonable supposition: and it
hardly worth while to support the general pro-
n with positive proof upon every occasion.
ces innumerable, however, would be forth-
g if they were needed in support of a concerted
ent for general revision; and the Repton case
able as demonstrating in open court the need
at revision. With regard to the by-law as to
space, the situation is almost farcical. By
n 23 (*d*) of the Public Health Acts Amendment
Act, 1907, it is provided that "The making of any addition to an existing building by raising any part of the roof, by altering a wall, or making any projection from the building, but so far as regards the addition only . . . shall be deemed to be the erection of a new building." Now, the by-law in question in the Repton case provides that "(1) Every person who shall erect a new domestic building shall provide in the rear of such building an open space exclusively belonging to such building, and of an aggregate extent of not less than one hundred and fifty square feet, and free from any erection thereon above the level of the ground, except a water-closet, earth-closet, or privy and an ash-pit. (2) He shall cause such open space to extend laterally throughout the entire width of such building, and he shall cause the distance across such open space from every part of such building to the boundary of any lands or premises immediately opposite or adjoining the site of such building to be not less in any case than fifteen feet." It is clear that according to the Act of 1907 a projection like that at Repton is a new building, and that therefore, according to the by-law, it must have the prescribed rear-space! In other words, the Act of 1907 rendered impossible, in certain instances, the application of the by-law as to air-space, and the decision of Mr. Justice Bailhache on this point should prevent any further attempts to enforce the by-law in conditions to which it has no proper relevancy. First, however, the by-law must be amended. Mr. Justice Bailhache quoted a judgment in which Lord Russell of Killowen had said that the by-laws of public representative bodies ought to be "benevolently" interpreted, "and credit ought to be given to those who have to administer them that they will be reasonably administered." But, as Mr. Justice Bailhache observed, "it would not be open to the local authority to act reasonably in the matter, because it was bound to enforce the by-law." That is why local authorities incur so much undeserved obloquy. They are often blamed for what they cannot help; for it is open to anybody, benevolent or malignant, to proceed against them for failure to enforce their by-laws. It all looks hopelessly wooden, and to devise a remedy will not be easy. To invest local authorities with optional powers would be to open the door to many abuses.

* * * *

Londoners were reminded, a few days ago, of the continued existence of St. Mildred's, Bread Street. A certain number of blind persons went there to receive the annual doles bequeathed by some pious seventeenth century benefactor. It was in Bread Street that Milton—the greatest of blind men except Homer—was born in 1608, and he was baptized at a church in Bread Street—not at St. Mildred's, but at All Hallows, which was in the section of Bread Street on the opposite side of Cannon Street, towards Cheapside. All Hallows was pulled down in 1877, and its site is marked by a bust of Milton. It was, of course, one of Wren's churches, and it disappeared not so much through the decay of piety in the City, as through the expansion of warehousing, the development of traction, and the growth of the suburbs, where a score of churches are built for every one that is pulled down in the City. Wren churches should never, in future, be utterly destroyed. If ever it should be deemed necessary to demolish any of them, the stones should first be carefully numbered, and the church reverently re-erected on some site in the suburbs, where, although it would lose much of the glamour of association and environment, it would at least preserve to posterity an example of a master whose works should be treasured with as much jealousy as those that are but paint on canvas. But an easel-picture has the superior merit of being supremely useless—always excepting that higher utility which is inherent in all true works of art. A tablet to Milton that was set up on a wall of All Hallows early in the nineteenth century is now affixed to the west wall of St. Mary-le-Bow, whose parish took over some of the obligations and assets of the parish of All Hallows.

* * * *

St. Mildred's, Bread Street, is unspoilt Wren, very few alterations having been made to it since, in 1683, it left the architect's hands. It is a characteristic example of what one may call his churches of the third rank as to size and importance. It is but 62 ft. long by 32 ft. broad, and the summit of its cupola is but 52 ft. from the pavement. It is built of brick, but fronted with Portland stone, in accordance with Wren's common practice, which is perhaps excusable where, as in this case, the side walls are hidden by adjacent buildings, but is detestable where, as at Bowchurch, the brick sides and the stone front can be seen together. One would like to know the explanation of these hybrids. Wren, we know, was partial to brickwork, and handled it masterly. Did he wish to build wholly of brick, but was overruled by the shopkeeping love of a showy front? Or did he, on the contrary, wish to build his churches wholly of stone, but was overruled by the demand for economy? One much prefers his red-brick front with stone dressings, as, for example, his church of St. Andrew by the Wardrobe. St. Mildred's front has the dear old familiar pediment, œillets, and pineapples; and the interior woodwork—dado, pews, pulpit, sounding-board, and altar-piece—is interesting for its panelling and carving. Of course Grinling Gibbons is credited with the carving; and, whether or not he did it, much of it is quite in his best manner. If the attribution is wrong, he must have had exceedingly clever imitators. Shelley and Mary Wollstonecraft Godwin were married in this church on December 30, 1816.

* * * *

Rodin's career, on which time and space did not allow of comment in last week's issue—in which, however, a notice of his death appeared—is lightly and briefly sketched in this week's "Here and There." It has been said that he was one of the greatest artists of all time. It is too early, however, to rank him positively with Michelangelo and Leonardo, time being of the essence of such judgments; and although, to the present generation, Rodin does not seem to suffer in the comparison, posterity may arrive at a different verdict. In the meantime, there is no question that artistic opinion in England exalts him to the highest degree, and that in the popular mind he is held in strong affection for his simple, gentle, and sincere character, as well as for the lavish generosity with which he has bestowed priceless treasures upon us. This feeling is shown in the holding of a memorial service in the historical church of St. Margaret's, Westminster, and in the sympathetic reply by a member of the Government to a question asked in the House of Commons as to whether this country would be represented at the great sculptor's funeral. Our own opinion is that no artist, ancient or modern, has succeeded so unequivocally in imparting life, passion, beauty, poetry, to stone. It is not surprising that he has "founded no school," nor
regrettable; for, truth to tell, his methods—we
tate to say his mannerisms—would be intoler
without his genius. But the methods were righ
him; and none else may bend the bow of Ulyss

* * * *

In a letter to the editor which we print this w
Mr. J. H. Kerner-Greenwood offers valuable ac
to the Welsh slate trade. In this industry there
considerable depression, even before the war, w
naturally has done nothing to improve the posi
How is it that this depression has come ab
There is nothing wrong with Welsh slates. The
no better roof covering. And millions of mo
Mr. Kerner-Greenwood says, have been spent or
equipment of the quarries, which therefore are
sumably in an excellent position for econor
production. Why, then, these loud and con
complaints of the neglect of Welsh slates?
correspondent, who is by no means unsympat
towards the Welsh quarries, suggests one or
reasons that would seem to account sufficientl
not completely, for the decline of that industr
any other. Persistent neglect of the ordinary m
of publicity is, sooner or later, bound to tell
deadly effect on any business. Natural slates
but rarely brought to the notice of archi
through the usual channels. Artificial roof-c
ings are constantly advertised. *Voilà tout.*

* * *

We publish this week a letter from the Pres
of the Institute (Mr. Henry T. Hare), in whic
associates himself with Mr. Ernest Newton's a
for further contributions to the funds of the Archi
War Committee. We cordially hope that the e
of these two gentlemen will be attended with suc
Since the beginning of the war the Architects'
Committee and its Sub-Committees have de
their energies in various directions on behalf of a
tects. All office and administration expenses ar
understand, borne by the R.I.B.A. and the Socie
Architects. The funds for which the appeal is
made are used entirely for the benefit of archi
whom the surprise of the war placed in unantici
difficulties. It is unnecessary to adumbrate the c
which have brought the practice of so many o
readers to a standstill; but the fact remains that
architects whose circumstances in the ordinary c
of things would have given them no occasion
anxiety found themselves without warning confr
with what amounted to financial disaster. The A
tects' War Committee and the Professional Em
ment Committee immediately set to work to d
schemes which would be helpful in such cases.
latter committee was responsible for the organis
of small special jobs for which payment has
made. The Architects' Benevolent Society
assisted by giving direct monetary grants, and a
Fund was started. Mr. Newton's appeal is for
which can be employed in these directions.
understand that unless liberal contributions are
coming considerable additional hardship wil
imposed upon a number of architects and their fa
who are at the present time receiving assistance.
architects fit and of service age are with the forces
the others have, in the majority of instances,
employment either connected with their professio
in some other direction. But there still remain a
the older men others who have not been so fortu
and who require the practical help of their profess
brethren who are in a happier position. It is no
to these that Mr. Newton and Mr. Hare wish to
their appeal, and we are convinced that it will n
made in vain. Contributions should be address
the Architects' War Committee, 9, Conduit S
London, W.1.

HERE AND THERE.

Rodin is dead. It is as if the monarch of the
forest had fallen. One instinctively classes him
with the great elemental, strong, rugged, simple
that stand out among their fellows like giant
amidst the brushwood. He was seventy-six;
e had hoped that he would live long enough to
s beloved country's triumph and to commemo-
: in an immortal group. For great men often
se the creative faculty at an age when meaner
f they attain to it, are feeble and palsied. Walter
e Landor, who springs to mind because his
, though exercised in another medium, was akin
din's in its Greek—almost Bœotian—austerity,
earing ninety when he wrought some of his most
ite fragments of poetry, and published them as
Fruits Off an Old Tree," and "Dry Sticks
ed." Like Landor, Rodin might have said—
en with a nearer step towards truth—

rove with none, for none was worth my strife.
ure I loved, and, next to Nature, Art;
armed both hands before the fire of Life;
inks, and I am ready to depart."

's must have been the larger experience of life,
had known the bitterest poverty, and had
hed over want, obloquy, derision; Landor was
s compared to this Lazarus.

* * * *

as another big-hearted poet, William Ernest
, who, finding an ill-conditioned pack of currish
yapping and snarling at Rodin's heels, laid
him right lustily with his hefty bludgeon; and
night withstand him when he remembered his
ng blow. Henley knew that vigorous aggres-
the best kind of defence, and while he was
of the "Magazine of Art" the opponents of
were chiefly occupied in extricating themselves
e mire of conflict. Henley's natural vehemence,
say violence, was in this instance aggravated by
circumstances. Rodin had tasted poverty; so
enley. Mr. L. Cope Cornford relates that there
ne occasion on which he [W. E. H.] and his
Anthony [the landscapist] were absolutely
ss. Henley, exhausted with hunger, lay on his
Towards evening Anthony, in desperation,
ut. In the light of the street-lamp he beheld a
glittering on the pavement. His heart stood
til a poor woman had passed the treasure with-
ing it. Anthony knew as well as most people
a shilling can be made to go; and the brothers
oper." Then, Rodin had been systematically
d and decried, and such persistent hounding
always led Henley to ascertain whether the
was worth defending. When, as a young man,
journeyed to Edinburgh Infirmary to place
in the hands of Dr. (afterwards Lord) Lister,
tor asked him, "Why did you come to me?"
se," said Henley, "the entire profession abuses
a charlatan."

* * * *

in his own country Rodin was without honour
s a youth, he produced work that was uncon-
al. His since famous bust of "The Man with a
Nose" was rejected by the Salon jury of 1864.
a contribution of his was rejected from the
cademy, and the fact seemed to Henley to be
matic of the decay to which the arts had fallen
country. It was a period when weak conven-
s worshipped, and artists lacked the courage to
way from it, knowing that he who dared to be
original was doomed to penury. It was a time
e artist, "hesitating between realism and con-
alism, achieved the namby-pamby." Henley
was sick of the namby-pamby, and during his editorship of the "Magazine of Art"—1882-1886—he worked wonders in converting the public to truer views. Whistler, as well as Rodin, owed much to Henley's trenchant pen and to his courageous choice of illustrations. Rodin's gratitude found expression in his modelling of a very fine bust of Henley, which is perhaps the best thing to be seen in the crypt of St. Paul's Cathedral.

* * * *

Indirectly we are, I imagine, indebted to Henley for Rodin's magnificent gifts to this country—the eighteen miscellaneous pieces at South Kensington, and the great group—the replica of "The Burghers of Calais"—set up in the park behind the Houses of Parliament—about the most obscure site that could be found for it. Accustomed as we in this country have become to sculpture of uninspired design and file-and-sandpaper finish, we do not, even yet, I fear, fully appreciate the rugged realism, the masculine energy, the fire and force, of those examples of his genius that Rodin so generously gave us. They will be the more highly esteemed as we come to a better understanding of the principles they embody. They are great not because they are primitive, but they seem primitive because they are great. They are a return to first principles, a revolt against formal scholasticism. In art, as in literature, there is a marked tendency to get further and further away from primal principles, to refine upon refinement until the work lacks vitality. Then there comes a faithful shepherd, a Whitman, a Tolstoi, an Ibsen, a Rodin, a Henley, who bears us by main force away from the narrow bypaths into which we had strayed like lost sheep and sets us again on the broad green pastures. Your Cubist header-off is no shepherd, but a goatherd.

* * * *

Rodin was for a long time a sheep rather than a shepherd. For years he worked in patient subordination to Carrier-Belleuse and others, whose work he was forced to imitate. "When I reached the age of twenty-six or twenty-seven," he writes, "I began to rid myself of school-notions. I acquired more assurance. I dared to see with my own eyes. It was then I availed myself of every opportunity to visit the cathedrals. . . . I awoke early in the morning and hastened to see what there was. Those steeples, those cathedrals, in the morning were a joy. I was happy! I stayed walking round and round them till I was tired out." At nine years old he went to school at Beauvais, whose cathedral is "the Parthenon of the Gothic." His book on cathedrals, published a few years ago, would perhaps have been more valuable if it had been less ecstatic. "Rodin was never a *praticien*," says Mr. Frederick Lawton, M.A., who has written the best biographies of him in English. "Neither for himself nor for others has he ever hewn stone or marble. He has always confined his fashioning to the clay, intervening in the fine-hewing merely to give the final corrections." His dexterity in modelling brought him serious trouble. He was skilful beyond belief. His "Age d'Airain," which was accepted for exhibition at the Salon in 1877, was so faithfully wrought that he was accused of the unpardonable sin of moulding the statue piece by piece on the living body! It was with difficulty that he cleared himself of this preposterous charge, which, at the outset of his career, played havoc with his reputation, his accusers refusing to put the matter to the touch by close investigation, and the newspapers naturally making the most of so sensational a scandal. In the end, his honesty was triumphantly vindicated in the only way that the public can understand—by the evidence of witnesses. To the eye of the expert, the internal evidence was sufficient—the statue could not have been produced mechanically. Eventually it was purchased for the Luxembourg.

* * * *

François-Auguste Rodin was born in the Latin Quarter on November 12, 1840. He had to leave school when he was fourteen, but then went for a while to an art school, where he began to try his hand at modelling. His mind was of the slowly maturing type, and three times he failed at the competitive entrance examinations of the Beaux-Arts School; though possibly the real failure was that of the examiners to understand his peculiar qualities. He then went to Barye, who encouraged and stimulated his love of nature. "And, next to Nature, Art." Young Rodin loved music and old church architecture. On the death of his dearly loved elder sister, Clotilde, he became a neophyte of the Church, but at the end of a twelvemonth returned to secular life. For six years he "devilled" for Carrier-Belleuse, helping, notably, with some of the relief decorations in the Louvre, and patiently subordinating his own personality to that of his master. After the war Rodin joined Van Rasbourg in decorating the Exchange at Brussels; worked, also, on carvings in the Brussels Palace of the Academies; and it was in Brussels that he shook off the shackles of the employer and began to assert his own individuality; there, too, that he learned the secret of giving to stone images an appearance of life and motion which could not be attained by merely copying faithfully the living model, but only by creating an illusion comparable to that produced by entasis. Flesh produces its effects in one way, stone in another; and Rodin discovered how to shape stone to give it the effect of flesh.

This is no occasion for examining Rodin's work detail. A mere list of them would extend to sev pages, and probably could not be made comp seeing that for a score of years he had worked an mously for taskmasters. His three great monumen the "Claude Lorrain," "The Burghers of Cal and the "Victor Hugo"—are so varied conception and execution as to leave no d that Rodin had the fecundity and versat that inhere only in the great masters. He has le is said, in his studio, a monument to Puvis Chavannes that is fully as noble and beautiful as others, but the enthusiastic accounts of those who been privileged to see it leave us in doubt a whether it is quite finished, but evidently it is enough advanced to fulfil its purpose. And lific as he was in busts, he never repeate pose or an expression; each has its own unique of the head and glance of the eye. It somehow se that each is more characteristic than the normal of the original, and this without the slightest trac caricature. It is as if the sculptor had surprised revealed the secret of the sitter's soul. Sometime in the case of the Balzac statue, it was not a ha secret; and Rodin's artistic conscience forbade hi flatter. I do not know how to express this mys better than in the words that sprang to my lips gazed for the first time on the bust of Henley. " like him?" a friend asked me. "More like him he was like himself," I replied. It has been said somebody who perhaps loved epigram better truth, that "France, whose general output in a to-day far above that of any other nation, has ne theless produced no really great artist." A suffi answer to this, were none other possible, would Rodin.

DIOGEN

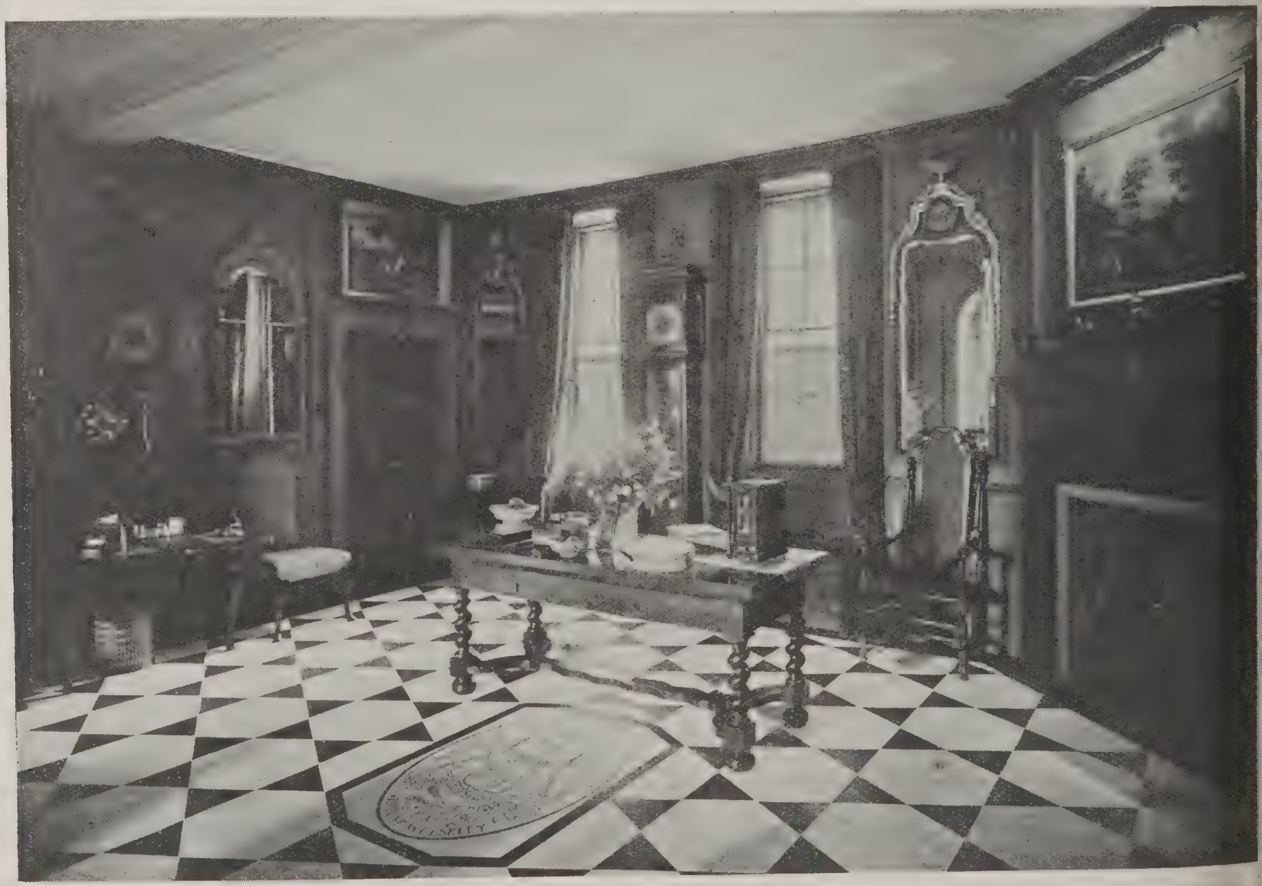

Photo: W. E. Gr

MEMORIAL TO LORD WOLSELEY. LADY HOUSEKEEPER'S LODGINGS, HAMPTON COURT PALACE: THE HALL.

J. L. DAVENPORT, ARCHITECT.

THE PLATES.

emorials to Lord Wolseley, Hampton Court.

permission of the King, and with the approval
of the authorities, the Dowager-Viscountess
Wolseley has recently carried out some admir-
work at Hampton Court Palace as a memorial to
ite husband. Lady Wolseley occupies the house
n as the Lady Housekeepers' Lodgings, formerly
esidence of Princess Frederika, and granted to its
pant by Queen Victoria in 1899. In its front hall,
has been judiciously enlarged, Lady Wolseley
ompleted the flooring of black-and-white marble
design of a star of six diamonds, originally pre-
for the Palace by Sir Christopher Wren.
in it she has laid down, in a simple oval, the arms
Field-Marshal, in fine lead work, incised in the
le, with dates commemorating his residence in
alace. In an upstair room, in place of a poor and
table ceiling, she has erected one with rich work
ster, of high relief, representing Lord Wolseley's
r and coronet, crossed batons, and oak wreath,
in a neighbouring room in much simpler fashion,
ilar ceiling, with Tudor rose ornamentation and
r, is intended to commemorate her own residence
house. A little turret in a downstair sitting room
a tiny oratory in honour of Lord Wolseley.
general scheme and aim of the work were to
te (as far as possible) the old missal paintings of
ourteenth and fifteenth century, and for this pur-
Mr. Charles Powell, the artist, drew upon the
ord missal, or book of hours, by the Brothers Van
in the British Museum. Describing his work,
Powell writes: "Starting with a vellum ground,
which I painted freehand, and in transparent
rs (to get the brilliancy and feeling of the old
) upon this, in the centre of each space of wall I
d Lord Wolseley's arms, with supporters, together
the Order of Merit and stars of his many Orders.
treatment is continued down to the dado, at the
f this is painted a black-and-white border. The
of the dado is painted in Venetian red, with (at
als) stripes of black-and-white chevron. Upon
lado is painted a fourteenth-century diaper in a
r shade of red, and upon this is painted a series
ite scrolls recording his Lordship's campaigns,
ties, and the commands he held. The ceiling is
rial throughout, with the mantling drawn freely
the various shapes and sizes of the eight panels
which it is divided by ribs of mouldings radiating
a central boss (a Tudor rose) to the cornice, under
is painted the memorial inscription. Mouldings
ornice are decorated with wave lines and barber-
wists, and richly gilded." The work throughout
esigned and executed by Mr. Charles Powell, and
. L. Davenport was the architect.

onument in the Place des Martyrs, Brussels.

e Place des Martyrs was built in 1775, by Fisco,
e site of a vast laundry. An attempt to open a
et in the square was unsuccessful, and, after the
ition of September, 1830, when Belgium threw
e yoke of the House of Orange, it was decided to
a memorial to the citizens who fell in the fighting
ussels. The Place itself had no immediate and
connection with the fighting, but it forms an
able setting for the monuments by Geefs, which
rected in 1838.

Soldiers' Memorial, Pittsburg, Pennsylvania.

this memorial an attempt has been made to com-
a monumental motif with a utilitarian purpose.
ardly the design has the character of a mauso-
while within it fulfils the functions of a concert
which is not a particularly happy or congruous
nction; but there can be no question about the
y of the design.

CORRESPONDENCE.

Architects' War Committee.

SIRS,—My predecessor in the Chair at the Institute, Mr. Ernest Newton, has, as chairman of the Architects' War Committee, just issued an appeal for funds which are necessary if certain most important and useful aspects of the work of that committee are to be continued. I need not, I feel, at the present time go into the reasons, which must be clear to everyone connected with building, for the necessity of such a fund. It is sufficiently well known that the hardship incurred by many members of the architectural profession has been serious. The fund which was raised at the beginning of the war is now completely exhausted, and it will be impossible to continue the work of subsidised employment and other means of assistance which are now being afforded unless Mr. Newton's letter meets with the liberal response it deserves.

I should therefore like to associate myself with his appeal, and urge upon members of the Institute and others to come to our aid in a difficult time. Unless this is done and fresh contributions are forthcoming the effect will be very seriously felt by many architects who deserve all the sympathy and support of their professional brethren.

All contributions should be addressed to Mr. Newton at No. 9, Conduit Street, W.1.

HENRY T. HARE, President, R.I.B.A.

The Welsh Slate Industry.

SIRS,—There has recently been published an interview with the members of the sub-committee of the Welsh Housing and Development Association, who have been appointed to inquire into the reason why the Welsh slate trade has been depressed for so long—even before the war.

It was pointed out that most people have agreed that there is not a better or a more serviceable covering to a building than a good slate roof.

It appears that from two to three million pounds have been spent by some of the quarry proprietors in equipping their works, and in face of this and other facts narrated to the interviewer, it is very surprising that foreign, and certainly inferior, slates should ever have been imported into this country.

There was a statement made that a natural slate ought to be able to compete with a manufactured slate because there is a saving of coal, tonnage, plant, etc., and that manufactured slates have been largely used by the Government, while natural slates are neglected.

I write to place before the Welsh slate trade the views and experiences of one who a few years ago sold hundreds of thousands of Welsh slates.

1. As all quarries do not produce the same quality of slate, I think it is essential that they must have a standard price—not only for the first, second, third, and fourth qualities, but for the produce of the inferior quarries. Who will pay as much for a slate containing pyrites, or a slate which cracks across the width, as for a slate without pyrites or one which cracks longitudinally? Let the lower quality be sold at a lower price.

2. If any merchant gives a greater discount than the association decides is the proper price, let him be mulcted in a heavy fine, and let him deposit money to cover this fine. I do not fear a slate "ring" of prices—there is too much competition with other roof coverings for that.

3. Advertise by newspaper and circulars. Appoint an advertising manager at about £500 per year, and give him £5,000 per year to spend.

At present there are only two or three quarry owners advertising, and their advertisements occupy such small spaces that few see the advertisements.

J. H. KERNER-GREENWOOD.

King's Lynn.

THE DEVELOPMENT OF THE ENGLISH VILLAGE.*

BY PROFESSOR S. D. ADSHEAD, M.A., F.R.I.B.A.

IN a study of the development of the English village it is necessary, in order to understand completely its deep-rooted communal system, to dwell at some length on its ancient origin.

The earliest records of village life in England show us a state of society whose members living together in detached groups were bound together by family ties—an almost universal system amongst communities of primeval people. The village community of the ancient Briton was tribal, and its site was less permanent than that of the late Roman settlements and Saxon village.

The Village and the Tribal System.

This tribal system in England has undoubtedly persisted until quite recently in the Celtic areas of Great Britain. The tribe, which consists of groups of a family under a chief, was at times wandering, and later in places settled in villages. In Wales in Saxon times there were two classes, who lived separately. One was composed of freemen living in scattered homesteads, and all of whom were of pure descent. They were subject to a chief or overlord, but in a military way only, whilst others, who were not of pure blood, or not bound together by family ties, lived separately, and, though not slaves, had to perform towards their lord duties that were servile rather than military.

Roman Influence on the Village.

But the real interest in the origin of the English village as distinguished from the Celtic village and the Danish village of the Eastern Counties, relates to the influences established by the Roman colonisation and late Saxon acceptance of the same. Let us, then, first consider the system of country life that obtained in the Roman provinces of Europe, and particularly Great Britain, during its later periods. We must remember that, apart from purely military *castra*, which often developed into cities like Chester, the land was for the most part populated on the villa system. A country having been conquered and roads surveyed, selected areas were parcelled out to those Roman freemen who merited reward for military service. The land was surveyed by the *agrimensores*, or land surveyors, who, after plotting the roads, at intervals set off squares of about $1\frac{1}{4}$ miles. These squares were outlined by four public ways, and were divided into twenty-five portions, about equivalent to the Anglo-Saxon virgate of 30 acres. The total area within each block was 810 acres: 781.55 was applied to agriculture and the remaining 28.75 acres to vicinal roads and agricultural tractways.

The Roman Villa.

The land having been surveyed, roads constructed, and the sub-divisions allotted, villas were erected and settlements established. The owner of the villa was a sort of gentleman farmer, whose staff consisted of slaves, who worked under the *villacus*, a free man. The villa in England was usually constructed of wood, and there were two outer courts; the one was occupied by the slaves, the other by the cattle. Besides the slaves there would be a number of *coloni*, free men but responsible to the State through the occupier of the villa, who was responsible for and collected the taxes in his area. In some cases there were groups of *coloni* and no villa; they would then be subject to taxation and military or agricultural service as tenants of the Empire, and were in different degrees of subjection.

The Saxon Incursion.

When the Saxons came over to England they fo
England well cultivated, also ironworks, quar
potteries, brick and tile kilns, glassworks, etc. M
than thirty walled cities, many camps, and mili
stations, and everywhere good roads. Near
town was an area of tilled land, and along the r
and at intervals of a mile stood neat and comfort
houses, each with its farm and retainers. It w
golden land to the Teutonic eye.

The Saxons divided by lot the land as they o
came it, according to the number of villas or esta
each going by lot. The Roman villa buildings
not burned or destroyed in raids preceding
settlement, seem often to have been left to fall
decay, though sometimes taken over lock, st
and barrel, the slaves and bondsmen continuin
live and work in precisely the same way as forme

This slight review of the state of the countr
the time of the Anglo-Saxon invasion gives us
best introduction to the next important typ
village settlement, the manorial village.

As to whether the Saxon village owes its m
pronounced features to the influence of the Ro
villa, as suggested by Seebohm, or to the aborig
tribal traits of the invaders' ancestry as sugges
by Sir Laurence Gomme, is a controversial ques
into which I am not qualified to, nor inclined to en
But let us describe in detail the Saxon village of
Norman times, which was a high water-mar
English village history.

Now, it must be remembered that during
period of invasion and during the early period,
settlement most of the village communities w
tribal in character—that is, bound together
family ties. Such a community is described
existing almost in its primitive simplicity in
Island of Harris, Scotland, so recently as 1
The higher order of tenants were mostly des
dants of different branches of the chieftain's fan
originally settled in patrimonial possessions on
estate. Many of these possessions had devo
in regular succession from father to son throug
long course of ages. Subordinate to this g
were the small tenants. A small tenant farm
a little commonwealth of villagers, whose house
huts were huddled close together. The land
longing to these farmsteads was yearly divide
lot for tillage, whilst the cattle grazed on the
tures in common. Labour was performed b
class of cottar tenantry attached to the farmst
who were paid in kind and in land allowances,
day a week of their time being granted for t
own use. Coarse flax grown on the ground
manufactured into shirts and other linens by
farmer's wife and daughters during the long wi
evenings, and the farmer himself was clothed f
the fleece of his little flock.

They ground their corn by means of the qu
i.e., a couple of light millstones set in motion
the hands by means of a staff fixed in the up
stone. Thus the estate was occupied by princ
tacksman or gentleman, small tenants, and cott
just the three classes which reappear.

The Roman Villa System.

As village life developed the tendency
towards priority of position on the part of one of
families of the free men. There was also the influe
of the super-imposed Roman villa system of liv
Suffice it to say that almost from the earliest pe
the manorial system (a system whereby a c

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* Extracts from the second of a series of six lectures now being delivered at University College, London (Gower Street, W.C.1), on Tuesdays at 5 p.m.

y owed complete allegiance to an overlord) stablished in England.

old distinction was Eorl and Ceorl, the former the noble, the latter the freeman. With rise gship new social distinctions were created. eorls, by reason of their wealth and military nce, became kings, and their chief comrades, bodyguards, became almost equal to Eorls, ere given big grants of land, etc. Evidently w aristocracy " is always present.

the typical village community of the middle ater Saxon periods consisted of a tun or ham, led over and partly owned by a thane or lord, ubject to him were the *geneats*, or tenantry, ir different degrees of freedom.

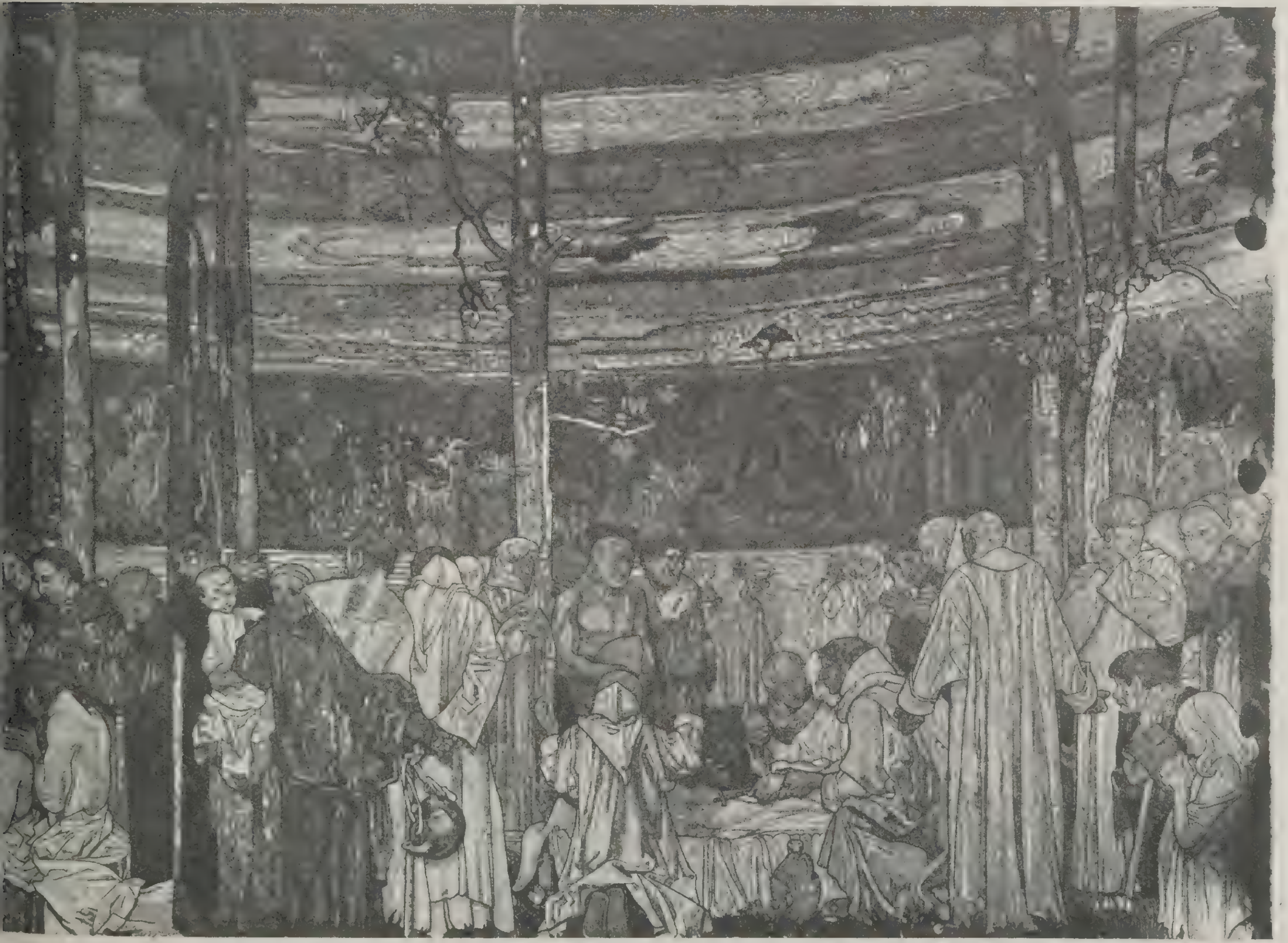
se consisted of the gebur, or villaine, and the rs. Also there would be shepherds, swine- , oxherds, goatherds, beekeepers, etc., these tly belonging to the cottier class. There also the slaves of the thane, who attended to mestic requirements and who really had no free- t all.

tun in its earliest presentment was sur- ed by a raised mound, topped with quick-set and with ditch outside. Inside the hedge lay rmhouses, with the barns and cattle stalls, the centre the sacred tree: the village or tun Outside the mound lay the home pastures olds. At a later period, as villages crowded her and monopolised much of the wild waste they would be organised for joint defence, he mound would disappear. The manor- , with its separate demesne, or home farm, hurch and the priests' house, would be the mportant features in the village.

(*To be concluded.*)

"THE ARCHITECTURAL REVIEW."

THE November issue of "The Architectural Review" has for its leading feature a profusely illustrated article on "Mr. Brangwyn's Mosaic decorations in St. Aidan's Church, Leeds," by Mr. Arthur Finch. These decorations, but recently completed, form, after the important work in Westminster Cathedral, perhaps the most notable modern instance of the use of mosaic for ecclesiastical purposes. The decorations are contained within the chancel, and represent three episodes in the life of the church's patron saint, namely: "St. Aidan giving buns and apples to the Poor," "St. Aidan Preaching," and "The Death of St. Aidan"—the last-named being shown by the illustration reproduced on this page. Additional value is given to the article by the inclusion of reproductions of Mr. Brangwyn's original cartoons. A comparison of these with the views of the finished work shows that, on the whole, the character of the "Brangwyn type" has been well preserved. The fine new building for the Crown Agents for the Colonies, Millbank (Messrs. John W. Simpson, F.R.I.B.A., and Flight-Lieutenant Maxwell Ayrton, R.N., A.R.I.B.A., architects), is fully illustrated and described in this issue, which contains, also, a number of interesting illustrations of the two late eighteenth-century houses in Bedford Square which have recently been taken over as headquarters by the Architectural Association. Certain necessary alterations will have to be made in order to adapt the houses to the Association's requirements; but nothing will be done to detract from the work of Thomas Leverton, who, of course, was responsible for the whole design of Bedford Square, and whose manner is well seen in it.



MOSAIC DECORATION IN ST. AIDAN'S CHURCH, LEEDS: "THE DEATH OF ST. AIDAN."

BY FRANK BRANGWYN, A.R.A.

R.I B.A.

Business Meeting, December 3, 1917.

A general meeting (business) will be held on Monday, December 3, 1917, at 3 p.m., for the following purposes:

To read the minutes of the general meeting (ordinary) held on Monday, November 5, 1917.

To proceed with the election of candidates for membership.

Building After the War.

A special general meeting will be held on Monday, December 3, 1917, immediately following the business meeting above announced, to consider the question of building after the war, with special reference to the question of official permits.

The meeting is called on the requisition of Messrs. Herbert W. Wills, C. H. Brodie, W. Henry White, John Slater, Francis Hooper, David Barclay Niven, Alfred Cox, and J. S. Alder, Fellows, and Messrs. Herbert Shepherd, M. N. Castello, Wm. E. A. Brown, and Gerald Cogswell, Associates.

Licentiates and the Fellowship.

The next examination of Licentiates desiring to qualify for candidature as Fellows will take place in January, 1918. Applications must be sent in before the end of December.

Captain Honan's Bequest to the Liverpool Society.

Captain Matthew Honan (A.), of Liverpool, who was killed in action towards the end of last year, has bequeathed to the Liverpool Architectural Society the sum of £1,000 to found an annual travelling studentship to be known as "Honan's Studentship," the scholarship to be open only to members of the Liverpool Society under the age of thirty years upon such competitive conditions as the society think fit.

"CEMENT FOR HOLLAND."

Commenting on this subject, a writer in the "Outlook" says: The figures with regard to the import of cement into Holland from this country are amazing. The Board of Trade returns show the quantities as follows: 1914, 20,800 tons; 1915, 4,100 tons; 1916, 1,300 tons; 1917 (first nine months), 41,300 tons. The Board of Trade, with its usual calm, assures us that none of these huge supplies are passed on to Germany for the construction of "pill-boxes" and concrete emplacements. But it is difficult to feel confident even of that. One thing is certain, as Mr. Miles, a member of the Baltic Exchange, points out in the British Empire Union "Monthly Record," all this cement sent from England to Holland releases the German cement which Holland formerly imported for German war purposes. Had England refused supplies, Holland would have been able to compel a supply from Germany in return for her exports of food to that country, for cement is essential to Holland for the maintenance of her system of dykes.

The following interesting letter on this subject has appeared in the "Glasgow Herald":

Sir,—Referring to your London Correspondent's remarks in your issue of the 2nd inst., wherein he reiterates that some unnamed persons, whom he calls "cement experts," think it possible to tell, by analysing the concrete of the "pill-boxes," whether the cement used was of German or English production, I can only say bluntly, after forty years' experience in the cement trade, that his supposed experts are obviously quite ignorant of the A B C of the subject upon which they presume to dictate to the Government and to instruct the people. Concerning the English cement exports to Holland, it must not be overlooked that the quantity shipped this year in ten months is not even equal to the quantity sent from Belgium to Holland during eight months before the war, and does not therefore fully replace the shortage created by the stoppage of Belgian deliveries to Holland. My arguments were therefore entirely consistent with your correspondent's contention that building activity in Holland has diminished to some extent. Your correspondent's assurance that nobody suspects the patriotism of the Associated Cement Company's directors is very flattering but incorrect. Whilst those who know us and know the facts of the Dutch position are perfectly satisfied, the "man in the street," who derives his information from the daily papers and who does not know us personally, greedily swallows every sensational yarn which is published broadcast by the scaremongers, both journalistic and political, who seek notoriety in their columns. For this reason we cannot afford to disregard these unfounded assertions, which not merely arouse indignation against ourselves, but injure the company whose interests are entrusted to our care. Regretting the necessity of troubling you with this further letter.—I am, etc.,

Herbert E. Brooks,
One of the Managing Directors of the Associated Portland Cement Manufacturers (1900), Ltd.

The following letter appeared in the "Daily Chronicle" of November 12:

Sir,—This question is of more importance than may appear upon the surface. Replies in the House of Commons to questions asked have been to the effect that Germany had no particular use for our Portland cement, as she herself manufactured cement in very large quantities, as did also Belgium.

On this allow me to state that, long before the war, architects prohibited the use in their buildings of either German or Belgian cement on the ground that those cements did not in any way approach the strength of our Portland cement.

The recent enormous use of concrete by the Germans in "pill-boxes" and other works on the field of battle demanded all the resistance possible to their destruction by our guns, etc., and the Germans know perfectly well the difference between Portland cement and their own cement for such resistance.

The Government representative asserts that the Portland cement at this very moment being shipped from London Bridge to Holland is for the sole use of the Dutch, in repairs, etc. to their dykes.

I rely upon one of our Labour members insisting, at the earliest moment, in the House of Commons, that this matter should not be allowed to drop until it has been probed to the bottom, principally because it involves the lives of thousands of our fighting men.

Wm. Woodward, F.R.I.B.A., F.S.I.
13, Southampton Street, Strand, November 10, 1917.

[The export of cement to Holland has since ceased.]

MR. HAYES FISHER ON HOUS AFTER THE WAR.

Mr. W. Hayes Fisher, President Local Government Board, delivere November 6, an address at the R Club, Manchester, on "Housing a Close of the War." Mr. Hayes said he hoped that before the sessio ended Parliament might have a cha discussing at least the main outlines housing policy which the Govern might think fit to adopt. The Govern ought to make, so far as it could, in junction with the local authorities, preparation for after the war. The ing question was really at the root social reform. People talked irrespo of the possibilities of revolution and dustrial unrest, but there would be n revolution nor industrial unrest if the ing classes could rest by night in de comfortable homes after a good day's with a good day's wage.

The State had never taken upon the obligation of building houses fo people; neither had municipalities o authorities thought it their duty to u take that work, not, at any rate, lately and to a very small extent. C the greatest difficulties would be the r of money, but the cost of materials prove to be the greatest difficulty. H going to be perfectly bold and say much the best plan was that we shou subsidise housing at all b - the Sta, out of the rates, but that we should so our commercial and industrial life th majority of the citizens would rece sufficient wage out of which they cou an economic rent for a decent dwe Within a year after the close of the w did not think it would be possible to more than 300,000 houses. There examples of State building at Woo and other places, and he would not le see it tried on a grand scale because not think the State built economicall issued a circular to local authorities had been so far pleased with the One-third of these bodies had not y plied, but it might be taken that authorities were prepared to build 2 houses. He hoped they would be pre to build 300,000, and he thought would when they came to be barg with. He had hoped to give some mation of what was meant by subst financial assistance, but he was not a do so because the Treasury had answered a letter he sent some tim asking what amount of money they prepared to place at his disposal s he might make bargains with the authorities.

OBITUARY.

Mr. W. Duddell.

A distinguished student and invest has been lost to electrical science b death, at the early age of forty-five of Mr. William Du Bois Duddell, F. C.B.E. Son of the late Mr. G Duddell, of Brighton, he had been dent of the Röntgen Society, and Institution of Electrical Engineers hon. treasurer of the Physical Society served as a member of the Adm Board of Invention and Research, tions Inventions Committee, and Advisory Council for Industrial Res and when the Order of the British E was instituted he was appoint Commander.

WAR·BVILDINGS·SECTION

THE CONSTRUCTION OF TEMPORARY BUILDINGS.*

BY JAMES S. BOYD.

is paper I propose to describe and ustrate some of the constructive ethods and materials which may be y employed in the erection of tem- y buildings, with particular refer- the materials used in the construc- a factory at Henbury, near Bris- n which works I was engaged as for the temporary buildings under m of Messrs. P. and W. Anderson, ontractors, Glasgow.

principal material used through- the temporary buildings was tim- ut the strictest economy in its use be exercised; and in place of tim- orrugated sheeting, asbestos slabs, ere largely employed.

k was largely used where possible, re again strict economy had to be ed owing to the high cost of trans- nd labour.

main idea to be kept continually foreground—whatever material one in ordinary circumstances have was that there should be no delay; had to go on with whatever mate- ere available.

ed not describe separately the con- on of all the temporary buildings d, as the greater part of the detail mon to most of the buildings on e. It will serve my purpose better ct a few buildings typical of the nt methods of construction d.

chief types of buildings erected grouped under four or five heads:

.—Timber-framed, with walls and eeted with corrugated iron. This included stores, joiners' and e shops, plumbers', painters', ', blacksmiths', and fitters' shops; also the central power house, fodder house, and hay sheds.

Second.—Timber-framed, with walls sheeted with weather-boarding and roofed with felt. This type embraced motor garage and motor transport sheds, cart sheds, stables, etc.

Third.—Timber-framed, with base walls of brick, exterior of walls weather-boarded, interior sheeted with asbestos sheeting. Roofs covered with roofing felt. This type embraced the whole of the housing scheme—houses, bungalows, dormitories, etc., general offices, and all such-like buildings.

Fourth.—Timber erections, such as time offices, tradesmen's houfs, latrines, urinals, dry closets, etc.

Fifth.—A few brick and concrete fire-resisting buildings such as drying stove, oil store, etc.

To represent type No. 1 I have selected for illustration a large building called the central fodder and chopping house. This building, which measures 123 ft., by 41 ft. 6 in., by 17 ft. high, was erected for the storage of all kinds of fodder, and for chopping, bruising, and mixing of same.

The walls were constructed with 6 in. × 2 in. studs at—as near as possible—2 ft. 6 in. centres, covered on the outside with corrugated iron. The site of the building was fairly level, and on the slightly uneven surface of the turf a "mud sill," 8 in. × $2\frac{1}{4}$ in., was laid, temporarily secured with wooden pegs in the ground (Fig. 1). At an average height of about 12 in. above this a 6 in. × 2 in. sleeper-plate was laid perfectly level, and supported by vertical blocks of 6 in. × 2 in. battens on end. The vertical studs of the wall were erected on this plate, a double stud being placed under each roof truss. The first row of 6 in. × 2 in. dwangs were fixed directly over the 6 in. × 2 in. joists, and then in horizontal rows at 2 ft. $10\frac{1}{2}$ in. centres to suit sheets 6 ft. long. The wall head was brought to a finish with a 6 in. × 2 in. plate on flat, on which the roof trusses rested. This building being much in need of cross-bracing, as the wall timbers were very light, and as there were practically no cross partitions, the gables and end bays of side walls had inclined braces fitted between the vertical studs.

The horizontal joints of the corrugated sheeting had a lap of 3 in., and the vertical joints a lap of one corrugation. The nails used were the common type, easily driven, but exceedingly difficult to extract.

The roof trusses used over this building, as in most buildings at this factory, were of the lattice-braced type, rising to an apex, and were known on the job as W.A.K. trusses, after the name of the designer, Mr. W. A. Kemp, chief engineer to the firm. Messrs. P. and W. Anderson modify this design of truss to suit varying spans up to about 70 ft., the span of the one under consideration being 40 ft. 6 in. clear. The trusses are placed at 10 ft. centres. They are built on the ground, and when complete are hoisted to the wall-head, the first one alongside the framed gable, the second one alongside the first truss, and so on. A derrick is not required, but great care must be taken to keep the truss in a vertical position until a few purlins are attached to it. The tiebeam consists of two 7 in. × $1\frac{1}{4}$ in. battens, 2 in. apart. The principal rafters are of two 6 in. × $1\frac{1}{4}$ in. battens at the same distance apart, and in the 2 in. space are fixed the 4 in. × 1 in. braces. At the junction of the principal rafter and tiebeam two thicknesses of 1 in. boarding are fixed, slightly inclined in opposite directions and secured with nails and a few $\frac{1}{2}$ in bolts.

To stiffen the building against transverse wind pressure we fixed two 6 in. × 2 in. stays near each end of the truss to the double wall stud. This double stay was bolted to principal rafter, the

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cture delivered before the Architectural n's Society of the Royal Technical College,

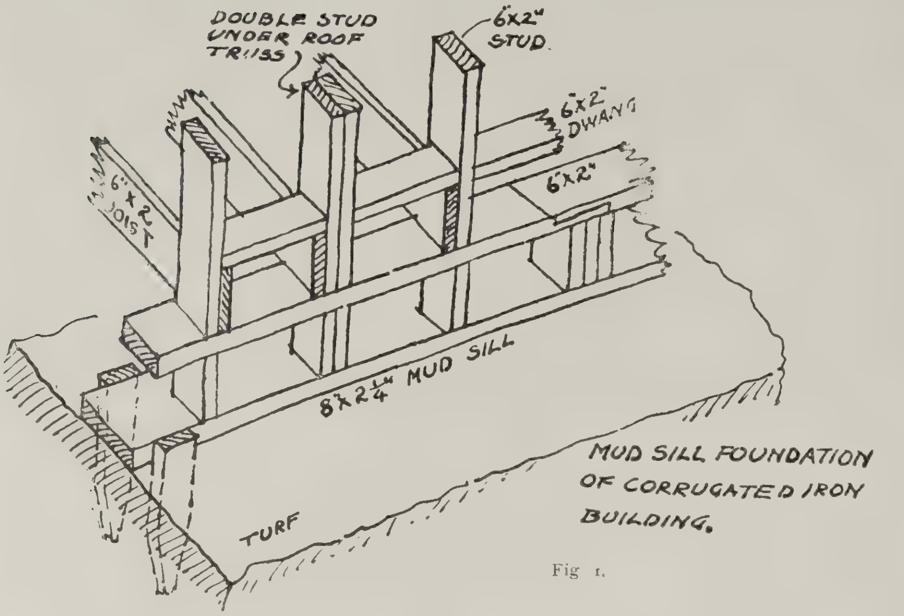

DOUBLE STUD UNDER ROOF TRUSS
6"x2" STUD
6"x2" DWANG
6"x2"
6" x 2 JOIST
8"x2¼" MUD SILL
TURF
MUD SILL FOUNDATION OF CORRUGATED IRON BUILDING.

Fig. 1.

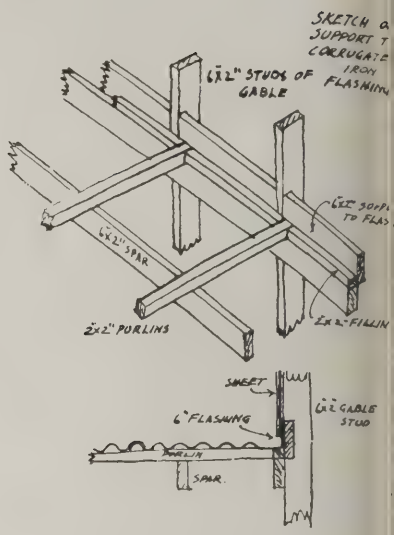


Fig. 2.

tiebeam and double stud. The trusses were also braced longitudinally, and 5 in. × 2 in. purlins were fixed at centres to suit the length of the corrugated sheeting.

The corrugated-iron sheeting of the lower roof of the office had to be turned up to form a flashing at its junction with the vertical sheeting of the gable of the higher building. (Fig. 2.)

The doors of this building were framed and lined, and being wide were made to slide horizontally. Cockburn's patent fittings were used for these.

The windows were small and simple in construction, being hinged at the sill to open inwards.

To illustrate the second type of construction my remarks will apply chiefly to the stables. There were four blocks of stables, each having eighteen stalls and two loose boxes, harness room and stableman's house, with an adjoining hay shed constructed similar to type one.

The walls were of 6 in. × 2 in. studs at centres suited to the spacing of the windows.

The studs rested on a mud sill, a row of horizontal dwangs being fixed at window-sill level, and a row below that level. The weather boarding was cut from 6 in., 7 in., or 8 in. × 3 in. deals, first split in two, then each half worked—if required to be dressed, as it was in the general offices—and then sawn to the angle. The wall posts, shoulder posts, and heel posts at stall divisions were double, consisting of two 6 in. × 2 in. battens with 1⅛ in. flooring slipped between. On top of the posts wood plates on flat ran the lengthway of the building, and on these the roof trusses rested. The roof truss employed was the lattice type already explained, but of lighter construction. Some of the floors were laid with hard burnt brick on edge, otherwise laid with blue paving bricks.

The windows were kept as high as the roof would allow, and were hinged to the sill of a solid frame.

The horse hospital consisted of a series of six loose boxes and two slinging stalls. Each stall and loose box had a hinged window, and a door opening directly on to the yard. The doors were made in two parts, the lower part being 5 ft. high, and the top 3 ft. high. The width of the doors was 4 ft., and they are overhung by a verandah roof projecting five feet from the front wall. The general construction was similar to the stables, except that the timber framing of the side walls was supported on 9 in. brick base walls brought up to the level of the brick floor.

The roof of this building was a simple truss made of batten timbers, covered with purlins, boarding, and roofing felt. A continuous ridge ventilator extended the whole length of the roof.

The cart sheds were not built before the demolition order came out, but it was intended that they should be open on both sides, only the gables being weatherboarded. The lattice trussed roof of 20 ft. span was supported on stanchions sisting of two 6 in. × 3 in. battens, bo together, and having a footing of a ba on flat and two angle stays. The s were to have been covered with boar and felt, but it is more probable that ugated iron would have been used.

The third type of construction is haps the most interesting of all. It sisted of 9 in. brick base walls and d sleeper walls, gables of 4½ in. pre bricks, walls weatherboarded on ext and sheeted with asbestos sheets on terior. Common couple roofs boa and covered with felt were used. The embraced all buildings in the hou scheme—foremen's houses, bungalow staff, dormitories for tradesmen, car and labourers, with accompan kitchen and mess-room blocks. general offices and drawing offices also constructed in a similar manner.

It is not my intention to describe building mentioned in this type. I confine my remarks chiefly to the struction of the foremen's houses. accommodation comprised in each h was a living room, fitted with port range, a parlour, and two bedrooms, slow combustion stoves. Projecting the back of the building was a scul with sink and wash boiler, a bathr with w.c., and a coal cellar, all on ground floor.

After the site was pegged off, tren were cut for the founds of the base w and the whole area under the building

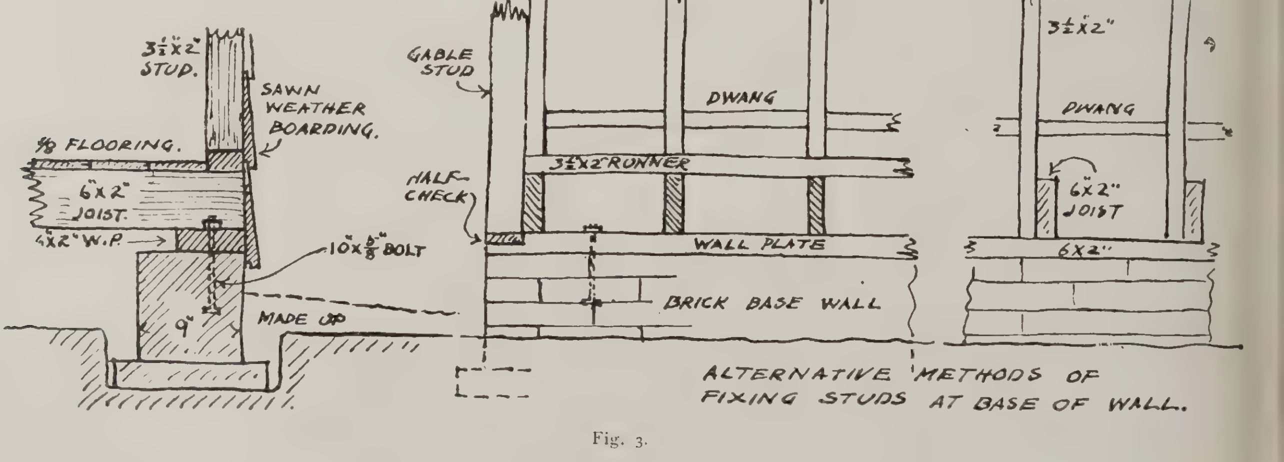


Fig. 3.

l of turf. The trenches were cut as
v as possible in level benches of
ne to two courses in depth, depend-
the unevenness of the ground. The
e depth was about 6 in. below the
The founds consisted of a single
; 14 in. broad, carrying a 9 in.
base wall, which averages 18 in.
bove ground level. The intention
at the ground should be levelled up,
: really very little of the brick wall
be visible (Fig 3).
bricks used in the base and sleeper
were Bridgwater perforated, Holly-
and Stonehouse, all wire cut,
l of very good quality and colour.
t mortar was used throughout. Em-
in the brickwork at distances about
art, and about 4¼ in. from the outer
the wall, were 10 in. × ⅝ in. bolts
re a 6 in. × 2 in. or 8 in. × 2 in.
ate, which was flush with outer
wall.
er joists (6 in. × 2 in.), at 18 in.
were skewnailed to the plate and
flush with outside of wall. Wall-
(4 in. × 1 in.) were laid on the
leeper walls, these walls being built
gher than the outer walls to allow
difference in thickness of wall
The houses were separated from
her by 4½ in. gables, built with
bricks so as to give a smooth sur-
hich could be finished with distem-
it away, and so save plastering.
gables were 9 in. × 4½ in. flues
ranges and stoves, arranged by
a 4½ in. projection on either side
gable. As these flues were short
e carried up vertically through the
was necessary to form at least one
n each flue to prevent down

reast was built solid up to about
urses above the floor, after which
commenced, and three bricks at
of each flue were built in sand, so
easily removed when setting the

completing the chimney head and
wish to follow up the construction
de walls of the house. The stan-
the walls were 3½ in. × 2 in., set
as possible at 18 in. centres to
3 ft. widths of asbestos sheeting.
thods were adopted for fixing the
the foot. In the first, the studs
ctly on the wall plate (see Fig. 3),
6 in. × 2 in. joists are nailed
against the former. In the second method a 3½ in. × 2 in. runner carrying the studs was fixed to top edges of the joists.

The former method was found best when only a small part of the building could be got away with, and this sometimes occurred owing to the presence of bricklayers working at the gables. The second method is best if the whole wall framing can be set up in one piece. When it was possible to adopt the second method, the studs with sill and top runner were all nailed together and lifted into position, plumbed and fixed, after which the dwangs were inserted. A row of dwangs was put in about 4 in. above the floor to support the lower edge of the asbestos sheeting and the 4 in. skirting. Two intermediate rows were inserted between this and the top runner, one of these rows being at the level of the window sills.

The roof spars and collars were 4 in. × 2 in. at 18 in. centres, but these could quite readily have been at 2 ft. centres or even wider.

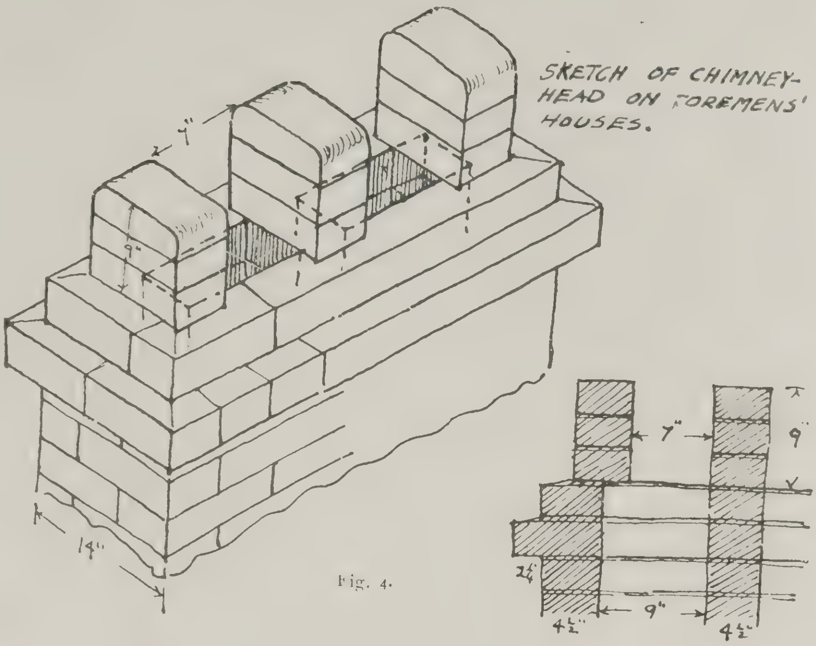


Fig. 4.

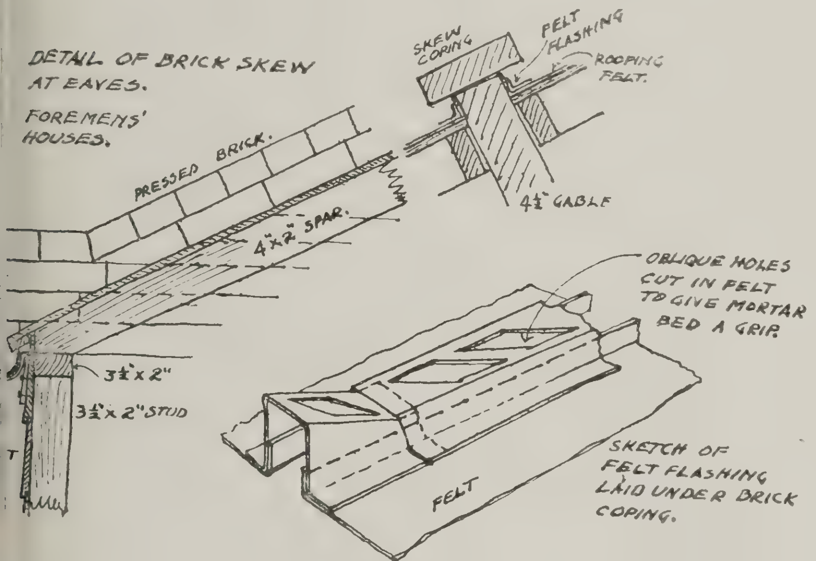

DETAIL OF BRICK SKEW AT EAVES.
FOREMENS' HOUSES.
PRESSED BRICK.
4"x2" SPAR.
3½"x2"
3½"x2" STUD
SKEW COPING
FELT FLASHING
ROOFING FELT.
4½" GABLE
OBLIQUE HOLES CUT IN FELT TO GIVE MORTAR BED A GRIP.
SKETCH OF FELT FLASHING LAID UNDER BRICK COPING.
FELT

Fig 5

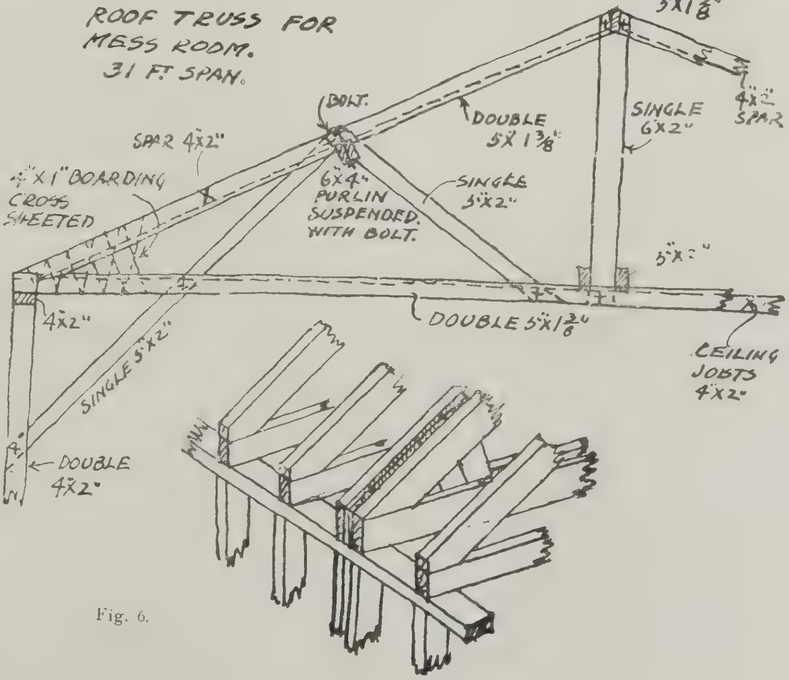


Fig. 6.

The collars used were checked, but checking could have been omitted by using 4 in. × 1 in., and this was approved for the next block of buildings. The "oxter pieces" where used should be 4 in. × 1 in. to save checking. The ridge board was of 6 in. × $\frac{7}{8}$ in. stuff, and kept down to allow boarding to come to the apex. The roof boarding used was usually $5/8$ in. checked sarking, but occasionally $\frac{5}{8}$ in. or $\frac{7}{8}$ in. tongued-and-grooved boarding was used. The roofs were covered with "Rok" felt—2-ply—laid parallel to the eaves and having a lap of about 2 in., the joints being stuck together with a composition and nailed with $\frac{7}{8}$ in. nails.

The walls were sheeted with weather-boarding commencing with an overlap at the joint between the brick and wall-plate of about 2 in. This boarding, and all other external woodwork, except wood casements, was treated with "Solignum."

The joisting of the floors was 6 in. × 2 in. at 18 in. centres, but these may quite well have been 5 in. × 2 in. The flooring was $\frac{7}{8}$ in., tongued and grooved, but sometimes $1\,1/8$ in. was used: it depended on what was available in sufficient quantity at the time.

The advisability or otherwise of finishing the chimney heads with terra-cotta cans was much discussed. Finally the detail shown in Fig. 4 was adopted and proved quite effective.

The internal partitions were built of $3\frac{1}{2}$ in. × 2 in. studs resting on the floor, asbestos sheeting being fixed on either side. The outer walls were also finished with asbestos sheeting fixed to the studs and dwangs, the joints being covered with $1\frac{1}{4}$ in. × $\frac{3}{8}$ in. cover-joint fillets. The walls of the kitchens were finished with $\frac{1}{2}$ in. beaded lining 6 ft. high, with a frieze of asbestos sheeting 3 ft. broad.

Ceiling and frieze were finished in white distemper. Walls from skirting to frieze were a greyish buff colour, also in distemper. All internal woodwork was treated with a brown oil stain, moderately light in shade. Exteriors of windows were painted with white lead paint. The exterior of all doors and all outside woodwork generally was coated with Solignum or other similar material. In order to prevent efflorescence on the brick gables spoiling the distemper, these walls were coated with vitrol, being allowed to stand for a day or two before applying the distemper.

The fourth type of temporary buildings include all those of a more portable nature, such as time offices, tradesmen's "houfs," urinals, latrines, dry closets, etc. They were all constructed with light framing about 3 in. × 2 in., and with tongued-and-grooved boarding fixed vertically, or with weather-boarding fixed horizontally to vertical studs. The roofs were boarded and covered with felt. Windows where required, were of the hopper type, and the doors were lined and ledged.

COMPETITION.

North Staffordshire Railway Company: Competition for Designs for Workmen's Houses.

The following notification has been received from the Royal Institute of British Architects:

"The Competitions Committee of the Royal Institute of British Architects request members and Licentiates not to take part in this competition, the conditions not being in accordance with the R.I.B.A. Regulations for Architectural Competitions."

NEWS ITEMS.

Memento of Southwark Bridge.

An inkstand made in part of granite from old Southwark Bridge has been presented to Mr. Redding, chairman of the City Bridge House Trust.

Women Brickmakers.

The largest brick kiln in the world, at Fletton, Peterborough, which had been closed for two years, was reopened last week with women labour.

The Federation of British Industries.

Sir Richard Vassar Smith, chairman of Lloyd's Bank, has been elected president of the Federation of British Industries for the forthcoming year in succession to Mr. F. Dudley Docker, C.B.

Wages in the Leeds Building Trades.

At a meeting of the Leeds and District Allied Building Trades Council an award of 1d. per hour advance in wages was given to the following trades: Bricklayers, stonemasons, carpenters and joiners, and builders' labourers. The advance is to be paid the first full week after October 17. This brings the present rate up to the following: Bricklayers and stonemasons, 1s. $1\frac{1}{4}$d., carpenters and joiners 1s. 1d., and builders' labourers $10\frac{1}{2}$d. per hour.

The Institute of Arbitrators.

At the annual meeting of the Institute of Arbitrators, held at Winchester House, Old Broad Street, E.C., on November 20, Mr. Henry Adams, M.Inst.C.E., M.I.Mech.E., F.S.I. etc., was unanimously elected as president, and Mr. H. D. Searles-Wood, F.R.I.B.A., etc., vice-president; the retiring members of Council, Messrs. Walter Lawrance, F.S.I., T. E. Bare, M.S.A., and E. J. Sadgrove, F.R.I.B.A., M.S.A., were re-elected.

Edinburgh Town Planning.

A conference was held on November 16 at the Local Government Board Offices between representatives of Edinburgh Corporation, the County of Midlothian, and the Local Government Board, regarding an application by Edinburgh Corporation for authority to carry through a town-planning scheme affecting the Niddrie area. Part of the proposed area is in the county; but as it is necessary in formulating a scheme to treat the ground in question as a single unit the Corporation ask power to that extent to deal with a small strip of ground beyond the Burgh boundaries. The view seems to be taken that the ground in question was suitable for a town-planning area, and the Corporation has been asked to submit their detailed plans and proposals within the next few days.

Timber Supplies and the Rebuilding of Dublin.

In the House of Commons recently, Mr. Nugent asked the Chief Secretary if he was aware that work in the destroyed area in Dublin was held up at present for want of sufficient timber, and whether, seeing that at the present time 7,000 tons of timber which was being commandeered by the Government was lying in the premises of the Merchants' Warehousing Co., and that many of the property-holders wished to proceed with the building of their premises, he would recommend that some of this timber should be released for work in the destroyed area. Mr. Duke replied: I am in communication with the Controller of Timber Supplies with a view to securing as good a supply as possible for the
pose of rebuilding, to which the fu
practical priority is being given.

A Portable War Hospital.

The portable hospital which is b
built for Columbia University is sai
combine the best features of British
French designs. Most of the build
are made of wood, but the opera
theatre, the kitchen, the laundry, and
garage are built of thin sheets of s
made in sections which can be easily
together. The foundations are mad
concrete. The walls of the wooden b
ings are double, with an air-space betw
It is said that one of these buildings
be put up in two days by eight men,
that the whole hospital, which has
designed for 500 patients, can be ere
within three weeks at the utmost, or in
less time, if the conditions are favoura
The total cost is estimated to be a
£60,000. This includes water, gas,
lighting, and a steam-heating plant.
works out at a cost of about £120 per b

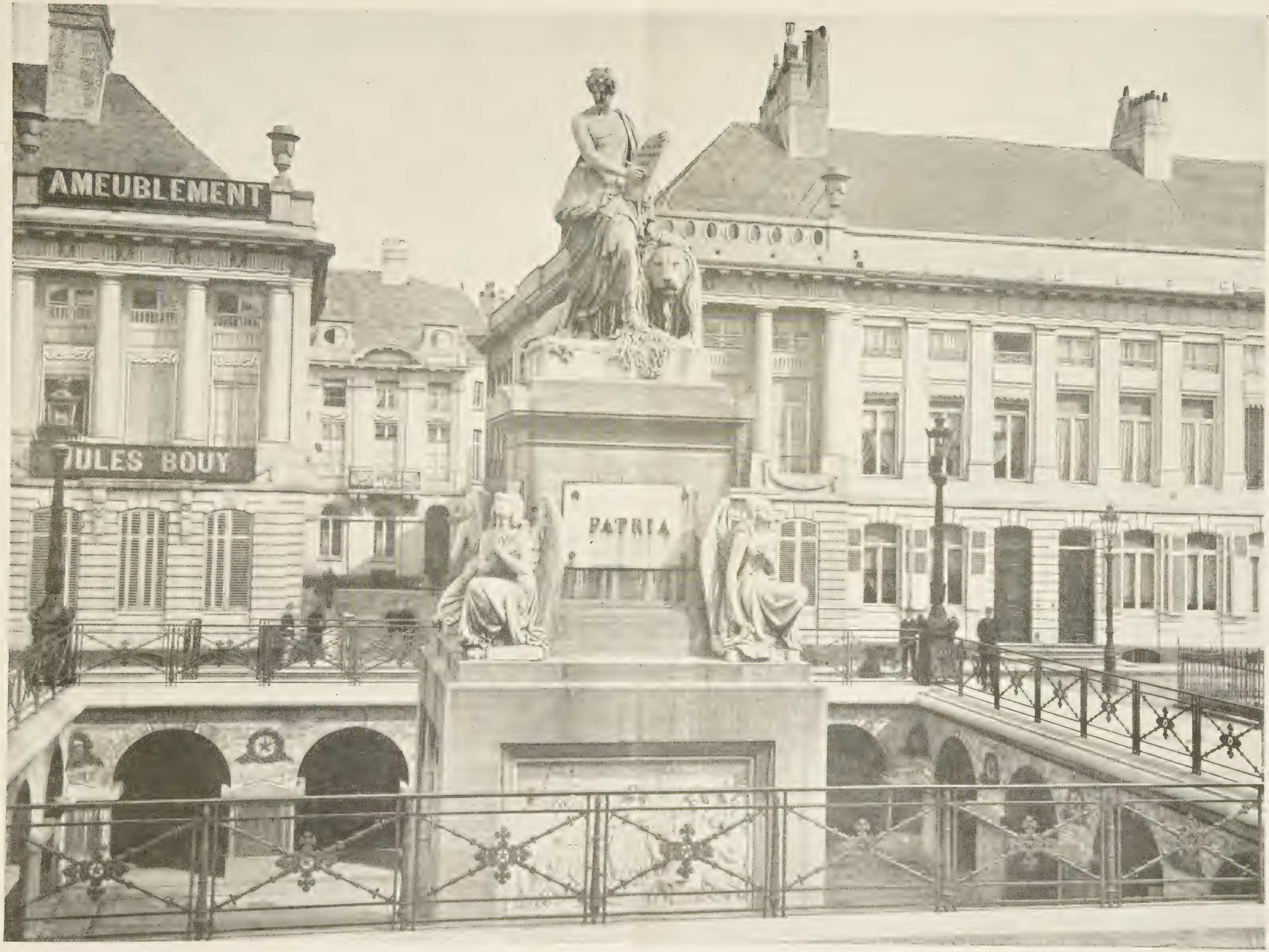
The Surveyors' Institution.

The ordinary general meetings of
Surveyors' Institution during the pre
session were arranged for November
and December 10, 1917, and January
February 25, April 8, and May 6,
The date of the preliminary examinati
January 16 and 17, and that of the pr
sional examinations March 18-22,
The president (Mr. Arthur Lyon Ryde
livered his opening address at 5 p.m.
November 18. Other papers which
been arranged are: "Agricultural Ex
tive Committees and their Work,"
Harold V. Raffety, O.B.E., Fellow; "
Metric System in its Relation to
Surveyors' Profession," by Lieut. A
Martin, Fellow; "The Effect of the
on the Present and Future Cost of B
ing," by Mr. E. H. Selby; "The Effe
Taxation on the Development of Mi
Estates," by Captain (late Professor) D
Bowen, R.E., Fellow; and "Valuation
Mortgage," by Mr. E. W. Rushw
Member of Council.

Housing in South Wales.

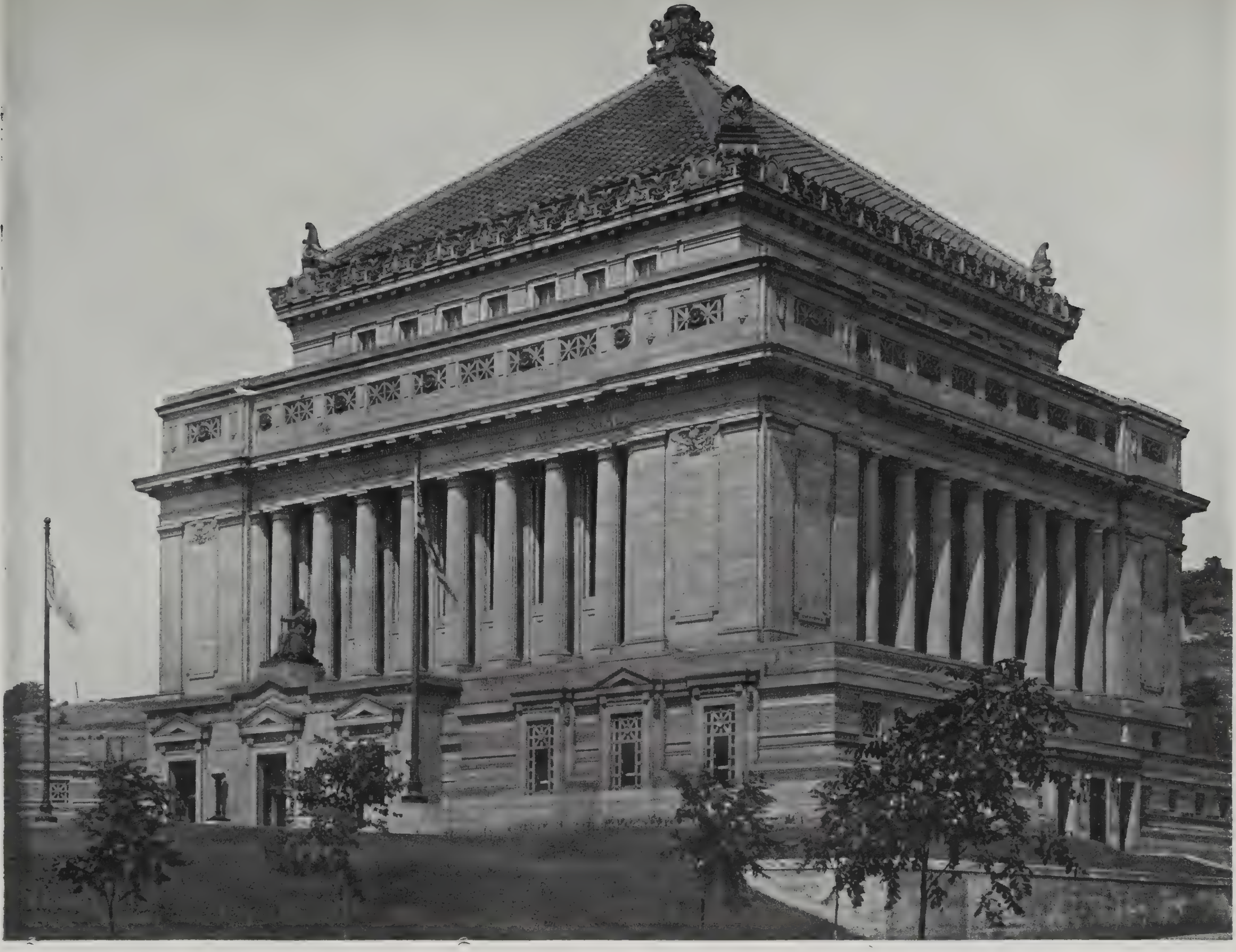
Mr. W. Harris, secretary of the S
Wales Labour Federation, has receiv
communication from the Board of T
stating that with reference to the re
tion passed by the Federation in con
tion with the housing of the wor
classes the President (Mr. Hayes Fi
was fully alive to the acuteness of the
blem in South Wales and would g
see the building of the necessary ho
started at once if that were in any
practicable. The position as reg
labour and materials made this im
ticable at the moment, and the fina
position constituted a further diffi
"At the same time," the letter conti
"the President is taking all possible
to secure that, when circumstances a
of building, there shall be no delay s
as his department is concerned, and
this object in view he is in communic
with both the local authorities and
Treasury. As regards the suggestion
many of the local authorities in S
Wales and Monmouthshire are negli
in the matter of housing, Mr. H
Fisher directs me to point out that th
turns which he is receiving from the
authorities in South Wales and
mouthshire certainly give promise of
siderable activity in the direction of
viding houses when the circumsta
permit."

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



MONUMENTS. XXXI.—MEMORIAL AND STATUE OF LIBERTY, PLACE DES MARTYRS, BRUSSELS.

BY G. GEEFS.



MODERN AMERICAN ARCHITECTURE (SERIES II.). XLVII.—ALLEGHENY COUNTY SOLDIERS' MEMORIAL, PITTSBURG, PENNSYLVANIA.

PALMER, HORNBOSTEL, AND JONES, ARCHITECTS.

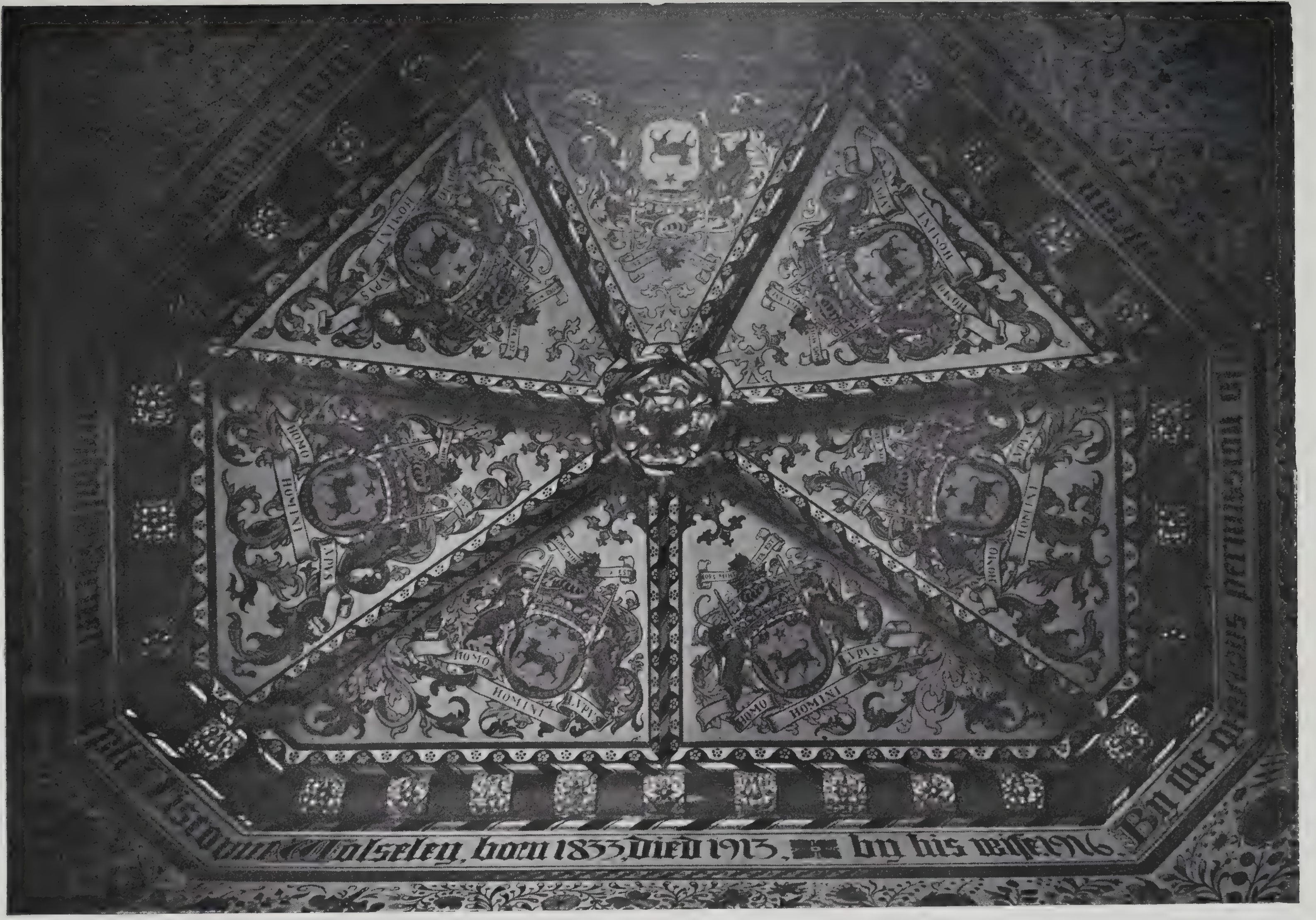
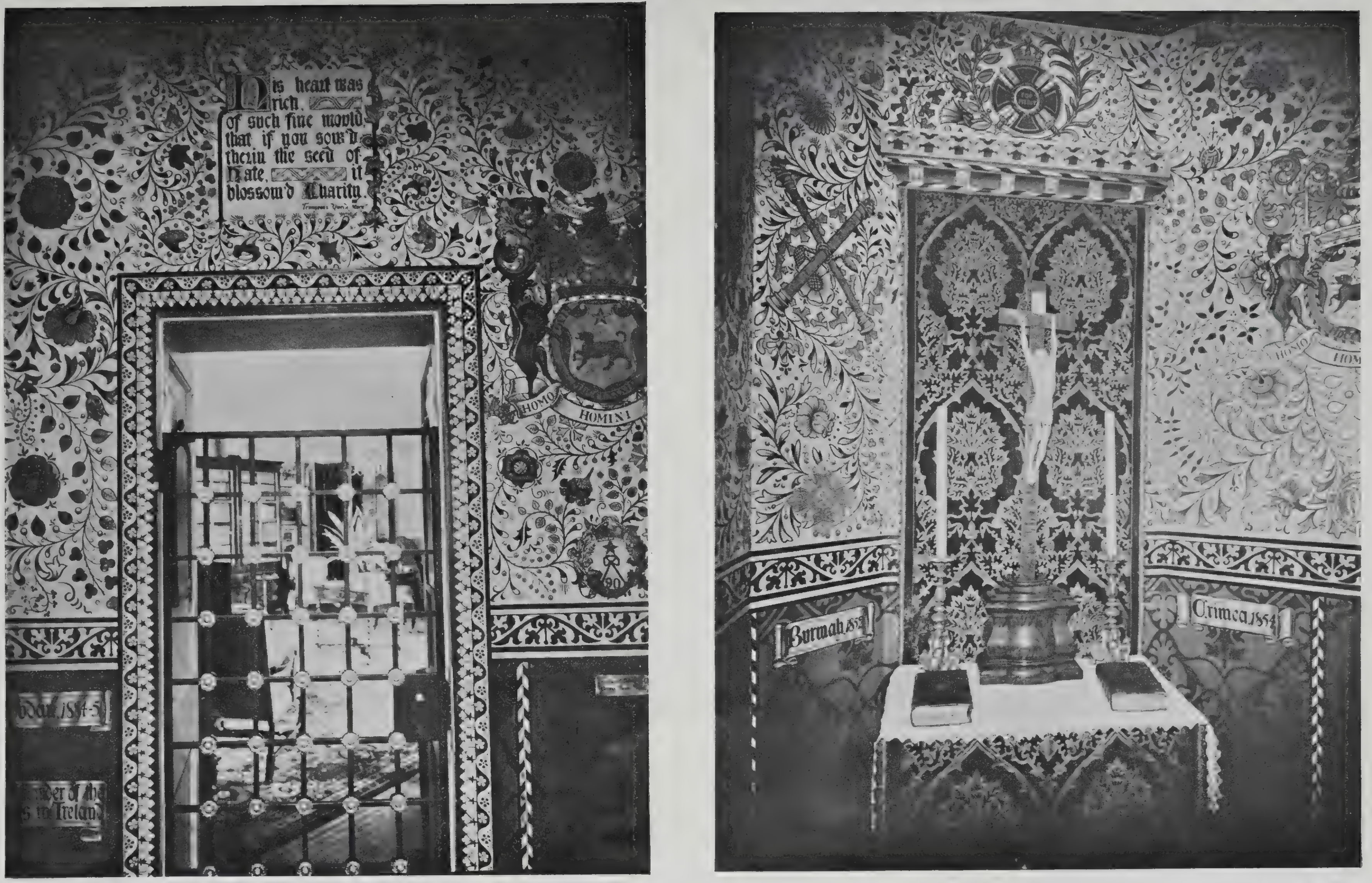

Viscount Wolseley, born 1833, died 1913, by his widow. By the gracious permission
HOMO HOMINI LUPUS

Photo : W. E. Gray.

CURRENT ARCHITECTURE (SERIES IV.). XXXIV.—MEMORIAL TO LORD WOLSELEY, HAMPTON COURT PALACE: CEILING OF ORATORY.

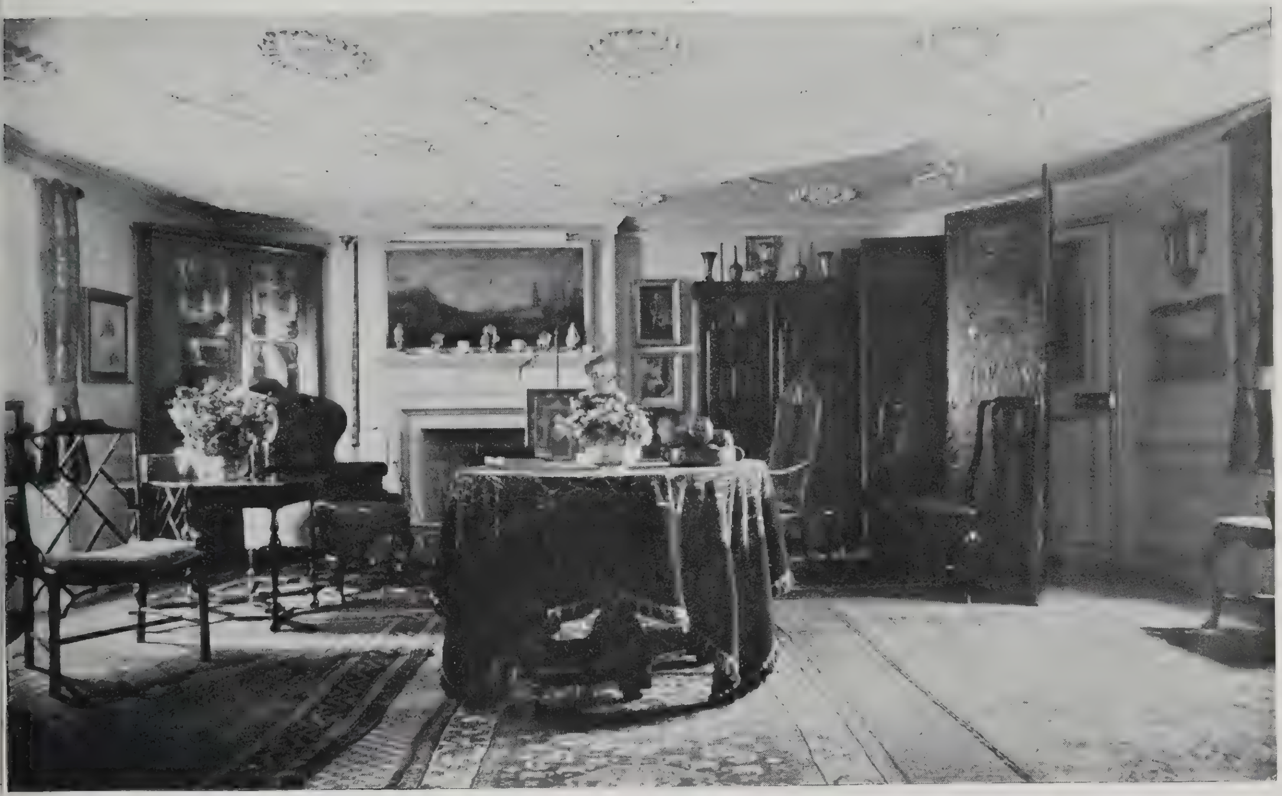
DESIGNED AND EXECUTED BY CHARLES POWELL.


His heart was rich, of such fine mould that if you sow'd therein the seed of Hate, it blossom'd Charity.
HOMO HOMINI
Burmah 1852
Crimea 1854

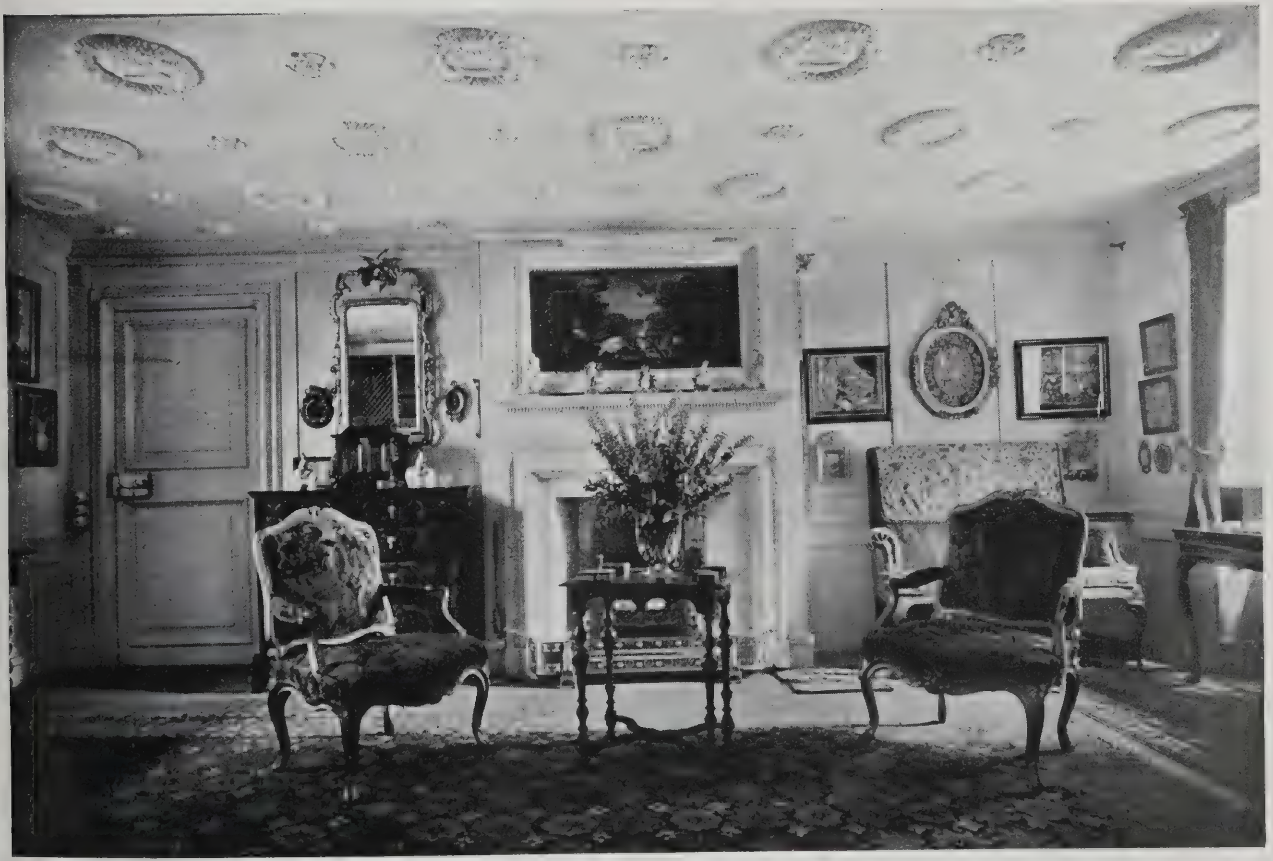
Photos: W. E. Gray.

CURRENT ARCHITECTURE (SERIES IV.). XXXV.—MEMORIAL TO LORD WOLSELEY, HAMPTON COURT PALACE: THE ORATORY.

DESIGNED AND EXECUTED BY CHARLES POWELL.



Lord Wolseley's Room.



Lady Wolseley's Room. *Photos: W. E. Gray.*

CURRENT ARCHITECTURE (SERIES IV.). XXXVI.—MEMORIAL TO LORD WOLSELEY, HAMPTON COURT PALACE.

J. L. DAVENPORT, ARCHITECT.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

DECEMBER 5, 1917. *TOTHILL STREET, WESTMINSTER.* VOLUME 46. No. 1196.

NATIONAL PAPER ECONOMY.

wing to the very necessary Government restric-
s on paper supplies, all elements of waste must
rigorously excluded. Our readers, we are sure,
gladly assist in promoting this object, which is
item in national economy. They can co-operate
h us effectually in either of two ways—(1) *By*
cing a direct subscription for this Journal, or (2)
placing with a newsagent an order for its regular
ivery. Casual purchases—now here, now there—
te a serious discrepancy between supply and
and, and cause a wastage of effort and materials
t could obviously be reduced to a minimum but
casual and erratic purchasing.

LETTER from the Royal Institute answers a
criticism of the conditions of the national
housing competition. There has been com-
nt, it would seem, that in framing those condi-
s the Institute has contravened its own
ulations, as there is no undertaking that the
cessful architect shall be employed to carry out
work. It is a complaint that we should never
e dreamt of making; but it is no doubt a perfectly
timate point, and may very possibly have been
de with the benign object of eliciting the very
sfactory reply that has followed so promptly. It
vith similar intent that questions are sometimes
ed in the House. We prefer to suppose that this
the idea, rather than that some litigious person
persons unknown had seriously insisted on rigid
ervance of the strict letter of the law. Yet these
and-tittle persons no doubt exist, and probably
e some useful purpose, but the trouble is that
y seldom know when to forbear. It will be
erally conceded, or we are much mistaken, that
an exceptional time and upon an emergent
sion, a rule made to meet normal and common-
e circumstances may be wisely honoured in the
ch. It is not as if these designs were those of
ses actually to be erected. Even if they were, it
ld be physically impossible, we imagine, for
r authors to superintend the execution of the
k. There are to be three hundred thousand
ses, and the successful designers will number,
aps, some fifty or so. Put them down at a
dred, and you get these fortunate gentlemen
with three thousand widely scattered houses to
d, and the rest of the profession occupied mainly
nvying them their opportunities for ubiquity and
getting rich quickly. But the successful designs
not necessarily to be built from; rather they are to
e as models for general guidance, and this fact
f itself sufficient to justify the casual suspension
the standing rule. Another vital consideration
has been already indicated here, and in the
B.A. letter some stress is laid on it—is that the
of the housing will be done when the bulk of the
ders return from the war, and to exclude any
hem from participation would be a cruel sacri-
to mere punctiliousness. All's well that ends
; and the R.I.B.A. letter ends with what, con-
ctively, is a very good joke—the Council of the
B.A. see no objection to members taking part in
R.I.B.A. competition! Sir William Gilbert would
managed the situation differently. Did not his "highly susceptible Chancellor" contemplate the possibility of committing himself for contempt of his own Court? And the R.I.B.A. Council must have had anxious moments in considering a comparable dilemma. *Solvuntur tabula risu.*

* * *

It will be generally agreed that the new series of R.I.B.A. informal conferences opened splendidly with Mr. Sidney Webb's masterly address, of which we gave a summary last week. His successors will be hard put to it to maintain the high standard which he set up; but as they will certainly try, Mr. Webb is to be thanked as warmly for his stimulation as for his address *per se*. No man living has his easy dexterity in the popularisation of economic facts and principles, nor his singular felicity in crystallising ideas that are commonly allowed to remain in solution. His engaging way of "accounting for things" is well illustrated in his use of the term "vocationalism" as a specific refinement on the phenomenon of which gregariousness is perhaps the generic expression. These informal conferences are a sufficient indication that he has not over-estimated the dynamic force of the vocational feeling; for do they not represent the coming together of those whom circumstances had vainly conspired to keep asunder? It would seem, however, that vocationalism has its drawbacks, and that one of them is a tendency to exclusiveness, which, according to Mr. Webb, keeps out of the profession the potential geniuses of ninety per cent. of the population, so that there must be "a large amount of professional skill going to waste." And not merely architectural skill. Can we afford to let this waste go on? We are all agreed that it is deplorable; but how shall we distinguish those geniuses, and, by rescuing them from oblivion, convert potential energy into actual horse-power? That is perhaps the main or the most material difficulty. There are other obstacles, mainly of a psychological character, that, failing Mr. Sidney Webb's happy knack of sterilising unpleasant truths, had better be left undefined.

* * * *

It is not quite obvious how the "tendency of every profession to be governed by the elderly members" comes into the category of "exclusiveness," where Mr. Webb puts it. If the tendency is a fact, the younger members are responsible for it. In voting power, as Mr. Webb knows quite well, they far outnumber their elders, and could capture the government if they were so disposed. In an elective body like the Institute they have the power to do it. That they seldom exercise that power may be taken as evidence that the "exclusiveness," if the term is admissible at all, is an approved convention rather than a grinding tyranny. Possibly Mr. Webb had in mind a certain tyranny of circumstances. Government is left in the hands of elderly men for several very obvious reasons. In the first place, young men are fully occupied with more mundane matters. They are struggling with the bread-and-butter question, winning a reputation, rearing a family. Elderly men have leisure, experience, perhaps wisdom and fame, titles and honours, weight and influence. Government falls to them quite naturally, but by no means exclusively, and we are disposed to think that, on the whole, they conduct it more satisfactorily than younger men—and, in particular, much more impartially, because the elders have fewer axes to grind. Mr. Webb's fears that the elders are likely "to ignore the new technique and the new methods" have but little relevancy to the Institute, and, we suppose, may be easily exaggerated with regard to other professional organisations that enjoy a comparably liberal constitution. Why did Mr. Webb take the age of fifty-eight as his gnomon? Apparently because that happens to be his own age, and because he has a very genial and fair-minded habit of bringing himself under his own condemnation, or of reasoning from his own disabilities; but if, in his modesty, he thinks that Mr. Sidney Webb is grown sere and yellow, he will, for once in a way, find nobody to agree with him. He could have found no more striking refutation of his own point. He is old enough to have done the State much service, and young enough to do as much again. No one who has opposed so many prejudices is held in such high and general respect and esteem.

* * * *

To Mr. Webb's statement of the grounds of association —the desire to promote a particular art or science, the fellowship impulse (architects may spell Fellowship with a capital F if they are so minded), and the possessive impulse—there can be but little demur. An architect who does not love his art is not worth his salt, an unsociable man is abnormal, and the labourer is worthy of his hire. Perhaps other professions are implicated in the allegation that the right and the duty of criticising everything done by the Government or by any public department on the lines of its own profession is not often exercised, but the records of the Institute would absolve it from any charge of flagrant dereliction of this duty. Within recent years, indeed, it has been pretty freely accused, by interested persons, of the opposite tendency. Its activities in the matter of unfair competitions are not always relished by the promoters; and although Mr. Webb may be unaware of what it did in the Canberra case, for instance, he could hardly plead ignorance of the prominent part it played in the Charing Cross Bridge controversy; and on the night of his address he was informed, if he did not know it before, of the very important rôle assigned to it by the Government in the matter of national housing. Mr. Webb's observations, however, will greatly encourage perseverance in this course. Preaching to the converted may confirm them in the faith.

* * * *

An excellent suggestion is made by Mr. A. E. Henderson, F.S.A., in a communication to the R.I.B.A. Journal. Historians, he observes, uniformly neglect architecture. "Take Gibbon or Green," he says: "in both these there is hardly any mention, much less description, of architectural buildings." History, it is pretty generally agreed, has been written hitherto without much sense of proportion. Things that matter are left out of the account, and the bulk of the space is taken up with interminable disquisitions on the political intrigues of kings, queens, knights, and bishops: the pawns are swept off the board as in mere disdain, and their manners and customs go with them. To this evil practice there is, so far as we are aware, but one considerable exception, a history which was specially devised—we believe, by the late Dr. H. D. Traill—to make good the notorious deficiency. This work is called "Social England." It faithfully realises its title, and gives a fair amount of attention to architectural development, as well as to the history of guilds and handicrafts. It is not, and could not well be, a one-man history, special knowledge being obviously required in each department of human activity. Consequently, this book—which is in several volumes—is written by several hands. Is not this the better way to write real history, as
distinguished from the more or less brilliant es
in which mere opinion and dissertation are exa
high above mere facts, which are shaped
coloured, expanded or contracted, to make a mo
that will suit the Whig or the Tory, the Church
or the Dissenter, the Protestant or the Catholic,
aristocrat or the democrat, who recognise in
one-man writer a champion of some particular
of views? Mahon and Mackintosh, Gibbon
Hume, Hallam and Lingard, Macaulay and Gr
Froude and Freeman, Ranke and Mommsen, to
nothing of Mr. Gilbert Chesterton, are all sick
o'er with the pale cast of prepossession, and the
no help for it so long as the people prefer preju
to investigation and ascertainment, verbal firew
to unsophisticated facts. In justice to Green's
lishers it should be mentioned that in one of
many editions of his history they have provide
wealth of illustrations, of which very many are
great architectural interest, and the same obse
tion applies to an illustrated edition of "Sc
England."

* * * *

Of course, the deficiencies of the general "
tory as she is wrote" are compensated by the mu
tude of special histories, in which architecture is
no means poorly represented. Fergusson and Gi
may be somewhat out of date; but Professor Si
son and Messrs. Sturgis and Fotheringham are
modern as can be expected of historians. T
there are monographs innumerable—Blomfi
Jackson, Gotch, Anderson and Spiers, Letha
Stratton and Garner, Belcher and Macartn
Richardson and Gill, Godfrey, and many other ar
tects, have enriched the literature of architect
with masterly treatises on various phases
periods, and the formidable dimensions of some
these monographs make it clear—if the dem
stration were at all necessary—that a general
tory of architecture is not a one-man job, but a c
for co-operation. This plan has been adopted w
regard to building construction. "Rivingto
has been recast on these lines; and Professor Sim
son, as editor of an excellent work on architectu
building construction, was careful to enlist the
vices of a specialist in each department. Mr.
E. Henderson's plea, however, is for more adequ
representation of architecture in the school
tories, and surely his demand is just. Here, aga
it is in the pictures that architecture is le
slighted; and the obvious fact that in works of
kind you simply cannot have pictures without int
ducing architecture in some form suggests at o
that the interest is included by an unavoidable a
dent, and that its inevitableness should have c
vinced the compilers that so insistent a subj
demands more ample treatment in the text. Amo
the many figures of speech that have been appl
to architecture—such as "frozen music," "
mons in stones," and so forth, there is none m
applicable to the present occasion than "petri
history." It is neither very pretty nor very hap
but it embodies a fact that has been overlook
In the great schemes of national and industrial
organisation that are now fermenting, the compl
recasting and modernisation of school-books
doubtless be attempted—they will be made m
practical; and we agree with Mr. Henderson t
the Board of Architectural Education will do a g
work in approaching educational authorities—a
we would add, the publishers of school-books—w
the object of securing this reform. Further, t
intervention should go beyond the expression
pious opinion; it should include an offer of so
form of practical help. No doubt the Literature Co
mittee of the Institute is fully alert to this opportun

HERE AND THERE.

as pleasant to see, in the editorial columns of last eek's Journal, a note on one or two of the old ondon churches. For me those grimy buildings had always a strong fascination. Having been most of them, I can cheerfully subscribe to the n that they are so many museums enshrining s of "bigotry and virtue"; into which category urely be admitted the stocks and whipping-posts Martin's-in-the-Fields. It is a pity that so many m "sport the oak" to all but a few persevering icans who have the energy to track down the cus- of the key, the courage to dare his frown, the to appease him with largesse. With gratitude nowledge the graciousness of some few incum- who have adopted the policy of "the ever-open and the generosity of the still smaller band of sts who throw-in a mid-day or toilers' dinner- rgan recital. Now, by St. Celia, parsons of this d breed are no "incumbrances"; they are bricks, selected and having the right metallic ring of ness.

* * * *

en St. Olave's, Southwark, is resolved to its nts, or at least to its units, I also shall be cast but not destroyed, I trust. Daily for many I have ridden past it in the train. I have heard but disparagement of its modest tower; but I come to love it, if for no better reason than for ke's sake; and "where one loves, one does not se." If, as seems probable, it does not survive shall miss it sadly when it goes, and so, I am will thousands of others—even those who do not its name, and who, if told the banal common- that Tooley Street, in which for yet a little while ds, is a corruption of St. Olaf Street, would meet formation with the indulgent grin that is the exasperatingly effective expression of blank ulity.

* * * *

this quaint little church is marked down for ction, and there is but little doubt that a y for clearing it out of the way of the busy non- nt provision merchants and ships' chandlers by it is surrounded will be granted. There was a n on this site in the thirteenth century, and ps earlier, but the present church was finished in from the somewhat bald designs of Henry oft. It is a dismal enough piece of fourth-rate ecture, but its square tower, which is fortunately it can be seen of it from the railway. assuredly a grace to an area that is otherwise deadly ugly nimaginably depressing. As to the interior, is, or was, over the nave a fine groined ceiling, d into five compartments, with a semicircular- d window in each. Richly gilt coffered work in micircular ceiling of the altar-apse used to be seeing, and, if it is still in existence, may be preserving as a specimen of eighteenth- y plaster-work.

* * * *

the City churches there is an abundance of ly decorative plaster-work, which would be well systematic study if only one could see it. But, lly speaking, these interiors are very gloomy, of them being shut in on three sides by business gs; while dirty stained glass, backed by rusty rk, serves only to make darkness visible. Then k panelling, eight feet high up the walls, the pews, the altar-piece of oak, with its fluted columns and their invariable Corinthian capitals—all this woodwork is well-nigh black—and I suspect that London soot has lent powerful aid to the natural process by which oak darkens with age. I have seen some stone columns that look like polished ebony, and I cannot suppose that this is an effect of exudation. The next time I happen to get within reach of one of those columns, however, I shall test it (by rule of thumb-nail) for some artificial coating that may have been deliberately applied; for I now know that (because City church interiors were not sombre enough) it was once the curious custom to paint statues black! There is an enormous amount of woodwork in the London churches; but as most of it has been carved by Grinling Gibbons (which is impossible), I trust that this observation will not meet the eye of the Timber Controller. Cherubim and seraphim, lion and unicorn, peapod and pineapple, and the like phantasies, disqualify the wood for secular uses. For this relief (high or low) much thanks.

* * * *

Often the sounding-boards are very elaborately carved; and I suspect that there are so many of them not because they are useful, but because they give the wood-carver an opportunity, and because the idea was once current that a pulpit without a sounding-board looked like a pot without a lid. Its presence is a comfort to those who are hard of hearing. They fancy that their hard case has been taken into tender consideration; and, since "imagination goes a long way," they fancy they hear better when they don't. Besides, where the sounding-board is suspended by a chain, there is always a sporting chance that the board will suddenly extinguish the preacher, which, I regret to observe, is sometimes a consummation devoutly to be wished. I remember a trifling foolish and profane jest about the very menacing sounding-board at St. Paul's Cathedral. An eloquent divine was in the pulpit. "Pardon me—who is the preacher?" whispered a newcomer. "Canon Liddon," was the whispered reply; imperfectly caught, perhaps—perhaps not; at all events, the inquirer rejoined, "Yes, I see he's got the lid on; but what's his name?" I never did hold with profane jesting.

* * * *

A few notabilia of the City churches are worth recalling. At the church (but not the present building) of St. Edmund the King and Martyr, Lombard Street, was buried in 1653 John Shute, author of "The First and Chief Groundes of Architecture." Inigo Jones was buried, in 1652, at the church of St. Benet, Paul's Wharf, which is now a Welsh church. It is a very decent if rather curious bit of brickwork, with swags thereon. Inigo's monument perished in the Great Fire, and Wren has been mildly reproached for failing to renew it: "I could wish," writes Peter Cunningham, "that Wren, in rebuilding the church, had rebuilt the monument." Peter has my suffrages. Sir John Vanbrugh was buried, in 1726, at St. Stephen's, Walbrook, wherein is the finest of all Wren's interiors. William Faithorne, the engraver, was buried, in 1691, at St. Anne's, Blackfriars. Hans Holbein is said to have been buried at the church of St. Katherine Cree, Leadenhall Street. The design of this church—a mixture of Classic and Gothic—is attributed—on rather slender evidence, I believe—to Inigo Jones. I vote for Jones. There is in this very interesting hybrid a sort of bravado that suggests the Jones touch.

DIOGENES.

THE DEVELOPMENT OF THE ENGLISH VILLAGE.*

BY PROFESSOR S. D. ADSHEAD, M.A., F.R.I.B.A.

(Concluded from page 237, *No.* 1195.)

A Typical Saxon Village.

As already stated, the village would be made up of a manor house with its home farm, the demesne probably consisting of about 500 acres. Clustering near by or straggling along an unkempt lane would be the farmhouses of the villaines, and closer together in groups would be the cottages of the cottier class. Immediately outside would be the yard lands of the villaines, the few acres of the cottiers, the meadows, and the open fields. There might be six or ten villaines (these are average numbers), each of whom would hold about thirty acres in the arable land. These acres would not be separate, but would consist of separate acre, and half-acre, strips, scattered all over the arable area, and inherited from father to son. In this area would also be a few strips, sometimes amounting to five acres, held by each cottier. The arable land was cultivated on the three years' system. Then there was the Lammas land set aside for hay, which was common after the hay harvest had been gathered on Lammas Day. Away outside would be the woods, wastes, and common land, common to all, but marked off roughly as included in the manor or tun. Whilst the villaine rendered service to his lord, practically the whole time of the cottier would be in service under the villaine. Of the cottier class were the ploughmen, shepherds, goatherds, etc.

Village disputes would be settled in the Moot Hall or Hall of the manor, or in early times under the village tree. Then we must not omit to mention the cow common and poultry run, the elementary village green.

Moot Hall and Church.

But we have said nothing of the church. The priest in early Saxon times was an educated freeman, who himself farmed and assisted at all village functions. He was a dependent of the lord of the manor, and his church was owned by my lord. During Saxon times he was essentially a farmer, and his church, as well as being used for religious service, is said to have been used for the folk plays and all sorts of social gatherings.

Now this is the typical village of England in late Saxon times; but, with such a mixture of races as Danes, Celts, and Jutes, and civilising influences like the Roman; it must not be supposed that the system was universal throughout England. As has been mentioned, there were free villages, villages presided over by free men, holding only allegiance to kings, and, as may be supposed, there were villages where a certain few of the villainery were little less influential than the lord. Such men were called *sochmanni*, found chiefly in the Danish districts, also in certain manors there were villaines who, as well as holding their yard lands, held pieces of land in the demesne itself, for which, as tenants in chief, they paid rent in money or kind.

Ancient Village Life.

One can see how full of interest was village life in these Saxon times. Each villager was sure of his lot, he had his own garden and agricultural strip, he had free access to the open land, where he could gather wood, fish, or, with certain restrictions, hunt game. He had his holy days and the days when the whole of the village proceeded to the market
town and the fair. He had his political int
also, for if not always participating in the ma
ment of the village he had at least a seat i
gallery, and was in intimate relation with all
was going on.

Norman England.

By the twelfth and thirteenth centuries the
ence of the Church had spread, and now the p
originally entirely dependent on the lord, ho
much more influential position, and my lord
very often an absentee.

Many new manors were erected by the Nor
and old ones taken over by lords of Norman st

England becoming more closely organ
national taxation was definitely established, an
manor became in a sense a Royal holding r
than an independent entity. Bishops would
numbers of manors. The manors of the Bisho
Winchester at East Meon, Hampshire, had fi
villages and 24,000 acres of land within its
daries.

Now the village quarrel, originally settled i
village, was a subject of perquisites if taken t
hundred moot, and the informal village market
came subject to strict supervision and the ex
tion of tolls.

The rule of restriction by which no villager
allowed to depart became more severe.
evaded lord and bailiff and slipped away to wa
along green lanes or in forest glades.

Rise of Trade Crafts.

The nobles, enriched by taxation, moved
with glittering retinue. Pedlars, musicians,
beggars tramped from fair to fair. Towns gr
number and importance, and whilst the handic
of the village were supplanted by the trade
of the town, towns became more and more d
dent upon the village for their food.

This great change in the conditions of servi
the agricultural classes was suddenly, in the
1349, augmented by the depredations of the
plague, and whilst in some cases it swept awa
populations of whole villages it left others all
the country wrecked and depleted. The sho
of labour that followed produced a rapid ri
wages, which was quickly answered by the pa
of the Statute of Labourers, an Act creating a
mum wage, resulting at the end of the fourte
century in a great peasant revolt. It was u
these conditions that arable land was turned ov
sheep farming and the introduction into the vi
of industries such as the manufacture of cloth.

Development of Enclosures.

It was during the fifteenth century that the
lopment of the system of enclosure first be
serious, no doubt encouraged by the eager inte
in the ownership of land now for the first time
cised by a new class of prospective landl
lawyers, and merchants from the towns. E
sure took place in three ways—(1) by de
agreement, (2) by gradual adjustment; and (3
appropriation; and thus we get the first appea
of convertible farming, whereby the farmer, in
of cultivating a multitudinous number of stri
virgates scattered all over the arable area, ha
holding consolidated into six fields. One can easil
how in succeeding centuries the holding of the

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* Conclusion of the second of a series of six lectures now being delivered at University College, London (Gower Street, W.C.1), on Tuesdays at 5 p.m.

ant became more and more precarious, and how radually became the landless labourer on the

om now onwards the history of the village as a l community is one of loss of intimacy and part- hip between the lord of the manor and his ntry, he at the same time strengthening his ly legal hold on his land, and it is easy to see the dissensions that set in amongst the labour- classes led, on the one hand, to food riots and ration to the towns, and, on the other hand, to lstering up of the paternal interest of the squire uch acts of benevolence as the founding of alms- es and the institution by Act of Parliament of s of relief of a charitable kind.

Increase in Travelling.

e seventeenth century saw an important in- se in travelling and a completely new face put ose villages that lay in the way of main roads, whilst it was not until the middle of the teenth century that England saw that important cle the stage coach, it was during the seven- th that the packhorse gave way to the wagon, we get an added importance to the village inn.

e King's court was in early times billeted on inhabitants. The King himself would be re- d in a neighbouring monastery, and so would great lord, also their retinue, in which case mmodation would be found for them in the astic guest house, often outside the walls of the l monastery. The monastic guest house would be the night refuge of poor travellers, wander- scholars, pilgrims, and such like.

Inns and Alehouses.

erchants and professional travellers would, as le, seek accommodation in the inns. These d seem to have been numerous if not very rious, or even always very clean.

the earlier centuries they were often mere cara- erais, where nothing except bare shelter was d. In these days travellers carried their own But later the innkeepers on the main roads me substantial people. There was much going d fro, and a regular service of horses seems to been established between important towns. In scription of a journey along the North Road in there seem to have been inns at regular intervals.

here there were no inns, the smallest village d certainly contain an alehouse, where the al traveller would slake his thirst. This was ated by a pole or post, called an Ale Stick, the end of which hung a bunch of bush or ivy, ant sacred to Bacchus. Apparently these ale- es were kept by women, notorious for their dis- st dealings. These places are described as being often the scenes of the quarrels of drunken ants and the revels of disreputable characters, male and female. The respectable traveller d quench his thirst and pass on.

ns in the fifteenth and sixteenth centuries became r fitted in their accommodation, though still little r than the Spanish *posada* as described so tely and contemptuously by George Borrow in his , "The Bible in Spain."

the middle ages there was always a distinction een an inn which lodges and entertains travellers a common alehouse which sells ale to all-comers. the London inns, such as Staple Inn, etc., which, simply lodging-houses, were probably the pro- ors of the modern hotel.]

was in the middle of the seventeenth century with the Act of Nonconformity, Quakers, Inde- ents, and Baptists each vied with one another tting up their respective tabernacles in villages, as well as in the larger towns. The result on the social structure of the village was loss of influence of the parson and a closer relation between parson and squire.

The Modern Village.

We now come to that period which connects the Stuart village with the village of to-day. The general appearance of the village is not much changed except that during the reigns of the Georges, in the case of the more progressive villages, many of the old thatched and casemented cottages left derelict by the decrepit labourer have given place to others of squarer proportions that are sashed and tiled. Where such changes are noticeable it is not always the farmer or squire who has undertaken this, but tradesmen and interlopers who have established themselves in the village that is now, in many cases, taking on the appearance of the town.

The Rise of Industrialism.

It was during the eighteenth century that the old village industries and older crafts decayed, to give place to the more economic methods of the factories in the rising towns. It was during the end of the eighteenth and the commencement of the nineteenth century that villages having mineral resources or lying in the direct line of trade routes, rapidly developed into manufacturing towns, and whilst this was going on on the one hand and the property of the village was being acquired by a manufacturing class on the other hand, in the more secluded villages of England enclosure still proceeds, and the labourer is still further trodden down.

Enclosive Acts.

In such rural districts, at the commencement of the eighteenth century, enclosures and open fields were still found side by side. It was a transitional period. Enclosed fields were now worked for the most part by the successful farmers, who employed hired labour; the open fields by a class who had withstood the oppression of ages—the cottiers, or the less successful of the farmer class. There were also now squatters, who had been allowed to erect cottages on the commons as labourers, and who were gradually acquiring rights. But there was a widespread demand for enclosure to meet the requirements of a more scientific method of agriculture, so the political cry ran. As a result this caused, between the eighteenth and the middle of the nineteenth centuries. the passing of some four thousand special Acts of Parliament for the consolidation of tenancies, and incidentally to enclose common land. There is no doubt that the reform was a good one, getting rid of, as it did, an enormous amount of entanglement between the arable holdings of small farms, but, used as a pretext for enclosing the commons, wastes, and pastures, it was one of the worst and most cruel series of Acts that the country has ever passed, eventually resulting, as it did, in the ruination of many thousands of poor families by dispossessing them of their common rights.

It is outside the purport of our inquiry to consider further the type of village which, losing its village character, rapidly developed the character of a manufacturing town, except to point out, and this is important, that the classes who make up the manufacturing towns of the nineteenth century are not the classes who made up the mediæval city or even the eighteenth century market town, consisting, as they did, of professional men, tradesmen, and independent artisans. The manufacturing town, on the other hand, is in its social structure an eighteenth-century village, except that the squire is now manufacturer and the labourer a factory hand.

It is my intention in my next lecture to inquire into the evolution of the industrial village—to-day one of the most important sections of the social structure.

CORRESPONDENCE.

R.I.B.A. National Housing Competition.

SIRS,—The attention of the Council of the Institute has been drawn to criticism of the conditions of the competition for working-class houses initiated by the R.I.B.A. on the ground that such conditions are in contravention of the Regulations for the Conduct of Architectural Competitions, inasmuch as no undertaking is given that the successful architect shall be employed to carry out the work.

I am directed by the Council to call attention to the following facts:—

1. The Local Government Board invited the R.I.B.A. to co-operate in the housing scheme by providing the best typical plans for cottages, which might be issued as a guide to Local Authorities and others in charge of housing schemes, to be used as instructions to the architects to be employed by them. An adequate sum of money is to be allotted as payment for these plans.

2. The Council consider that they have acted in the best interests of architecture in acceding to this request. They considered that the best way of procuring the designs was by means of a public competition, rather than by instructing a few architects to prepare them, especially in view of the fact that the great majority of architects are at present debarred from the practice of their profession.

3. Particulars of the designs asked for have been carefully prepared, so that there should be no likelihood of their being used other than as types showing the kind of houses that are required. The designs do not cover or provide for the varying conditions which will present themselves in actual housing schemes, nor do they touch the matter of lay-out, a very important part of the architect's functions. Moreover, it is the intention that a competent architect shall be employed in every scheme that may be initiated by public authorities.

4. The payment offered to the authors of the successful designs is adequate to cover the exceptional conditions.

5. If the present competition had carried with it the commission for execution of housing schemes all architects now on Service would have been precluded from taking part in such work when they are released from the Colours.

6. The entire circumstances are quite exceptional, and the Council see no objection to members taking part in the competition.

I am, Sirs, Your Obedient Servant,
G. NORTHOVER,
On behalf of the Secretary.

Royal Institute of British Architects, 9, Conduit Street, Hanover Square, London, W.1.

Architectural Association Bureau and Drawing Office.

SIRS,—Some time ago you were good enough to give publicity in your columns to the Association's scheme for assisting members of the architectural profession on their discharge from the Army. One of the proposals outlined was the establishment of a drawing office, in which men upon their discharge would find employment, until such time as they could obtain permanent work, and in which an opportunity would be afforded to those not physically fit to take up employment elsewhere, of working under circumstances specially arranged to meet their requirements.

I am now writing to inform you that the drawing office is established, and whilst fully aware that work in the architectural profession is scarce at the present time, I shall be very grateful to any architect who can send work to the office to be done. Any type of drawing can be undertaken, and assistants can be sent out to architects' offices for temporary work. I am
the office will commend itself to the profession,
that its existence has only to be known to ensur
receiving sufficient support to make it a success.

I would also draw attention to the fact that
Architectural Association Bureau is most anxio
help any member of the profession, being discha
from the Army, in matters connected with his retu
civil life, and that special arrangements are b
made in the schools to re-train and assist those w
military service has rendered this necessary.

Through the bureau, many discharged soldiers
been helped in various ways, and it is hoped
others requiring assistance will not hesitate to r
their needs known.

F. R. YERBURY, Secreta

35, Bedford Square, London, W.C.1.

THE PLATES.

Alterations to No. 22, Conduit Street, London

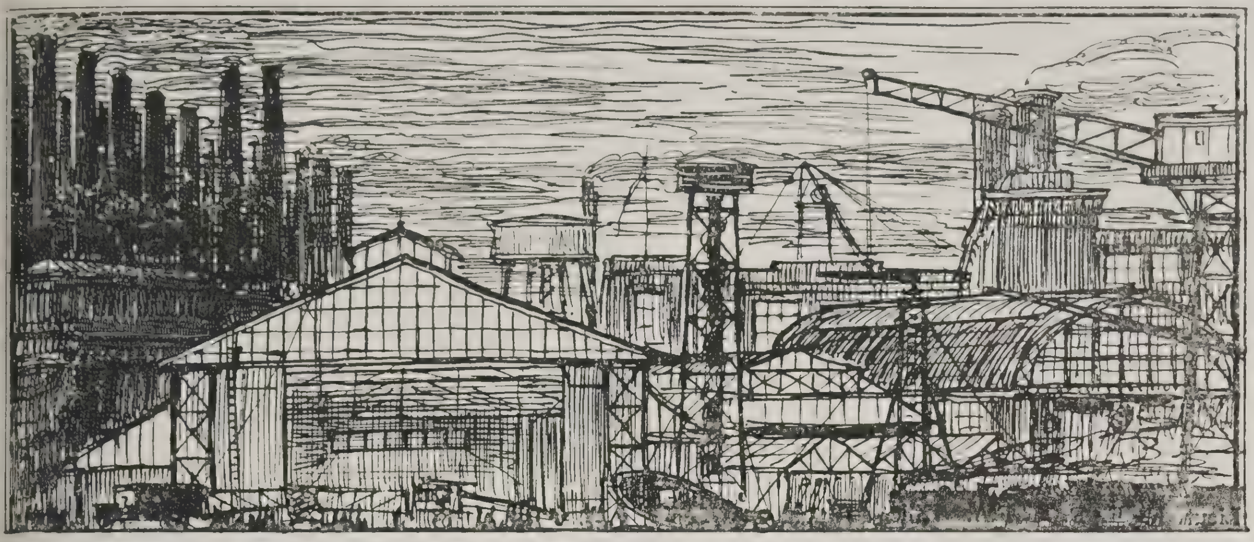
THE premises comprising No. 22, Conduit St
and No. 32a, George Street, Hanover Sq
were acquired some time ago by Mr. R.
Phillips, estate agent and auctioneer, late of
Bond Street, who has carried out extensive altera
and decorations in order to adapt the premises t
special requirements of his business. The gr
floor and basement have been entirely re-arrange
follows: From the entrance hall on the Conduit S
front access is had to a large gallery or reception s
18 ft. 6 in. wide by 50 ft. deep, with a clients' telep
room adjacent. At the end of this salon is a ce
corridor, from which is entered the principal's pri
office, 13 ft. 6 in. by 20 ft., and six other rooms as of
with private lavatory and cloak accommodation,
a staff staircase to upper portion in rear. Over
are arranged three special typists' rooms (sound-p
and the staff lavatories and cloak rooms. The
to Conduit Street is carried out in Portland stone,
bronze bay windows and wrought-iron balconettes
railings, and iron casements to the windows a
These were carried out by the General Iron Fou
Co. Messrs. Taperell and Haase were the archit

Decorations at Deysbrook, near Liverpool.

Deysbrook, West Derby, near Liverpool, was
in the 'forties for the Blundell family, but is now a
valescent hospital for children from the West D
Workhouse. The commission for the Deysb
decorations was obtained for Stevens in 1847 by
L. W. Collmann. With the architectural part of
interior Stevens had nothing to do. "The ro
Mr. Stannus relates, "were wanted for a special
pose at a given time. Mr. Collmann had given a
notice, and when the time drew near became
anxious. To all his reminders Stevens returned
answer, 'They will be ready.' There remained
than a fortnight, and Collmann was in despair.
Stevens arrived with a carpet bag, a small portfoli
sketches, and a colour-box, and executed the dec
tions in something less than one day each. They
sketched on the walls in red chalk and thinly pai
in Parris's Medium, without models of any kind."
illustration reproduced on one of the plates in this i
shows a detail over the chimneypiece in the la
drawing-room. In the roundel is "Minerva"
her owl.

The Salon, Blenheim Palace.

Typical of its generation, when immense apartm
were the dominating feature of all the g
"Palladian" mansions throughout the country,
salon at Blenheim is not perhaps the most excel
example of its kind. It is interesting, however,
being typical of the peculiar taste prevalent in
rather degenerate period to which it belongs.



WAR·BVILDINGS·SECTION

OUSING AND TOWN PLANNING AT THE CLOSE OF THE WAR.

nterim report has been prepared by e Technical Conference set up by ional Housing and Town Planning to consider and report on various is which are likely to present them- or solution in regard to housing n-planning action at the close of and more especially the following (1) The methods by which the best and site plans can be secured for schemes to be carried into effect lose of the war in both urban and eas. (2) The provision of work- utions of technical difficulties aris- regard to: (a) The shortage of s (and more especially timber), ich shortage is due to the abnormal which will arise at the close of the the economical adoption and use ing construction of new materials forms of materials; (c) the substi- f materials in construction—e.g., titution of concrete for timber in ists, etc.; (3) The provision of aving appliances in the equipment es; (4) the provision of useful nities for experiment; (5) the it of the scope and possibilities of andarisation in the production of nt parts; (6) the statement of the n which the bye-laws usually in n in (a) urban and (b) rural areas e amended in order to permit of tion of new ideas in building con- ; (7) methods by which the planning of those areas in which -war housing schemes to be nto effect can be secured—includ- elaxation of conditions as to road residential roads.

members of the Conference have the basis of their inquiries some estimate as to the number of r the working classes likely to be th the financial assistance of the n the year following the close war, and the figure of for England and Wales, d by the President of the Local Government Board—the Right Hon. W. Hayes Fisher, M.P.—in a speech delivered at Manchester on November 6, 1917, has been adopted. The members of the Conference have, to give still further clearness to their inquiries, assumed that these houses will, approximately, be distributed as follows: Urban areas, 200,000; rural areas, 100,000. These figures apply only to England and Wales, and do not include estimates as to the number of houses which should be built to meet the undoubtedly grave and pressing housing needs of Scotland.

With regard to this estimate for England and Wales of 300,000, the members of the Conference desire to emphasise the fact that the building of this number of houses will not do more than make up for the shortage of the supply of new houses directly due to the cessation of building activity during the war itself, and will leave untouched the general housing question, with all that this means with regard to sanitation, etc.

The members of the Conference are satisfied that if 300,000 houses are to be erected in one year, the organising ability and energy of at least one-half of the employers in the building trade will be needed, and the labour of not fewer than 400,000 workmen will be required for the accomplishment of the task. The same proportion applies to the subsidiary trades engaged in the production of building materials, for at least one-half of the productive energy available in normal times will be needed to supply the materials to build these houses.

It is urged that the houses should not only be designed with a high measure of skill, but should also be executed in a substantial manner under most careful supervision. They should also mark a clear advance on the type of houses built for the working classes in the period preceding the war. It is desired to emphasise the fact that it will be necessary at the close of the war to ask the tenants of the new houses to pay higher rents than those current before the war. For this reason, if for no other, the new houses must be made so attractive as to secure that they shall be fully in demand and be regarded by those living in them as possessing valuable amenities well worth the extra rent charged. Given the exercise of architectural skill in designing, the cost of a well-designed and well-planned cottage need not be substantially greater than that of the "brick box" in a row built abutting on the street.

With regard to detailed points in construction, local authorities are urged to insist that in all plans adopted by them the following clear points in good cottage building shall be observed:

(1) The houses should be broad—rather than deep—in order to secure that all the rooms shall have ample light. (2) Back extensions are better avoided, and all the rooms should be brought under the main roof. (3) Three bedrooms should be provided in all the new houses. (4) The houses should, as a rule, be provided with parlours. (5) Each house should have a bath, with provision for hot-water supply, either in a separate bathroom or in the scullery. (6) Ample window space should be given, and the windows should be carried as near to the ceiling as possible. (7) Where the bye-laws do not already demand it, an impervious layer of concrete, or other approved impervious material, should be laid under all floors to prevent damp rising, and a proper damp-proof course should be provided to all walls. (8) The level of the ground floor of the house should be above the level of the ground immediately surrounding it. (9) The assistance of women with close knowledge of household economy should be sought in regard to details of interior construction, such as the design of the stairs, the provision of cupboards, larders and storage accommodation.

We hope to find room in a future issue for further extracts from this report.

THE R.I.B.A. RECORD OF HONOUR: FORTY-NINTH LIST.

THE following particulars are taken from the current issue of the "R.I.B.A. Journal":

Killed in Action.

Atkinson, Lance-Corpl. Beaumont E., Middlesex Regiment, Licentiate. Killed in action on September 23.

Tucker, Arthur Haines, Royal Sussex Regiment, Licentiate. Killed in action.

Brundle, Lieut. (acting Capt.) Henry Carleton, Lancashire Fusiliers, Probationer. Killed in action on October 9.

Lieut. Brundle was killed while leading his company into the Bulgar trenches. He was a pupil of Mr. A. Heron Ryan-Tenison (F.), who writes: "I have lost a faithful friend and a man I could trust." His colonel and brother-officers and chaplain speak equally highly of him.

Members' Sons.

Adams, Lieut. H. F. R., R.F.A. Killed in action. Aged twenty. Son of Mr. H. Percy Adams (F.).

Mr. Adams's elder son, Capt. Cecil Adams, R.E., one of the first to get a Military Cross for gallantry in the field, was badly shell-shocked, and is now filling the appointment of military instructor to the Canadian Military Academy at Ontario.

Crow, Pte. Arthur Arnold, Essex Regiment, formerly of the Artists' Corps and Captain of the Loyal North Lancashire Regiment. Killed in action. Elder son of Mr. Arthur Crow (F.)

Capt. Crow in July, 1916, had to resign his commission in the Loyal North Lancashires on account of ill-health. Recovering, he found he could not regain his rank without abandoning the prospect of foreign service. He therefore preferred to enlist in the Essex Regiment as a private.

Military Honours.

Howitt, Lieut.-Col. T. Cecil, Leicestershire Regiment (Associate, 1911), has been awarded the D.S.O.

The official report states: "In Flanders, early in October, Major Howitt commanded a battalion in the field with the utmost gallantry. Supporting the front-line troops his battalion assisted in repulsing five hostile counter-attacks. He then took over command of another battalion in addition, and held on to the position until relieved. He was very slightly wounded on the day prior to the attack." He has since been promoted Lieut.-Colonel.

Woollatt, 2nd Lieut. John, R.E., of Beeston (Associate, 1910). Awarded the Military Cross.

2nd Lieut. Woollatt joined the the Royal Engineers in June 1916, and, after training at Newark, received his commission and went to France in December, 1916, where he was attached to the 79th Field Company. He was severely wounded at Ypres on August 8, 1917, and is now in Horton, County of London, War Hospital.

Serving with the Forces.

Intimation has been received that the following are serving, bringing the total to 78 Fellows, 533 Associates, 331 Licentiates, and 299 Students:

FELLOW.

Allen, J. Gordon, 2nd Lieut., R.F the Artists).

ASSOCIATE.

Jenkins, W. D., Sergt.-Major, R.

LICENTIATE.

Finn, H. R., Lieut., R.E. Jo sapper in July, 1916; given com in January, 1917.

STUDENT.

Pite, Horace V. W. (son of Mr. Pite (F.), Hampshire Regiment.

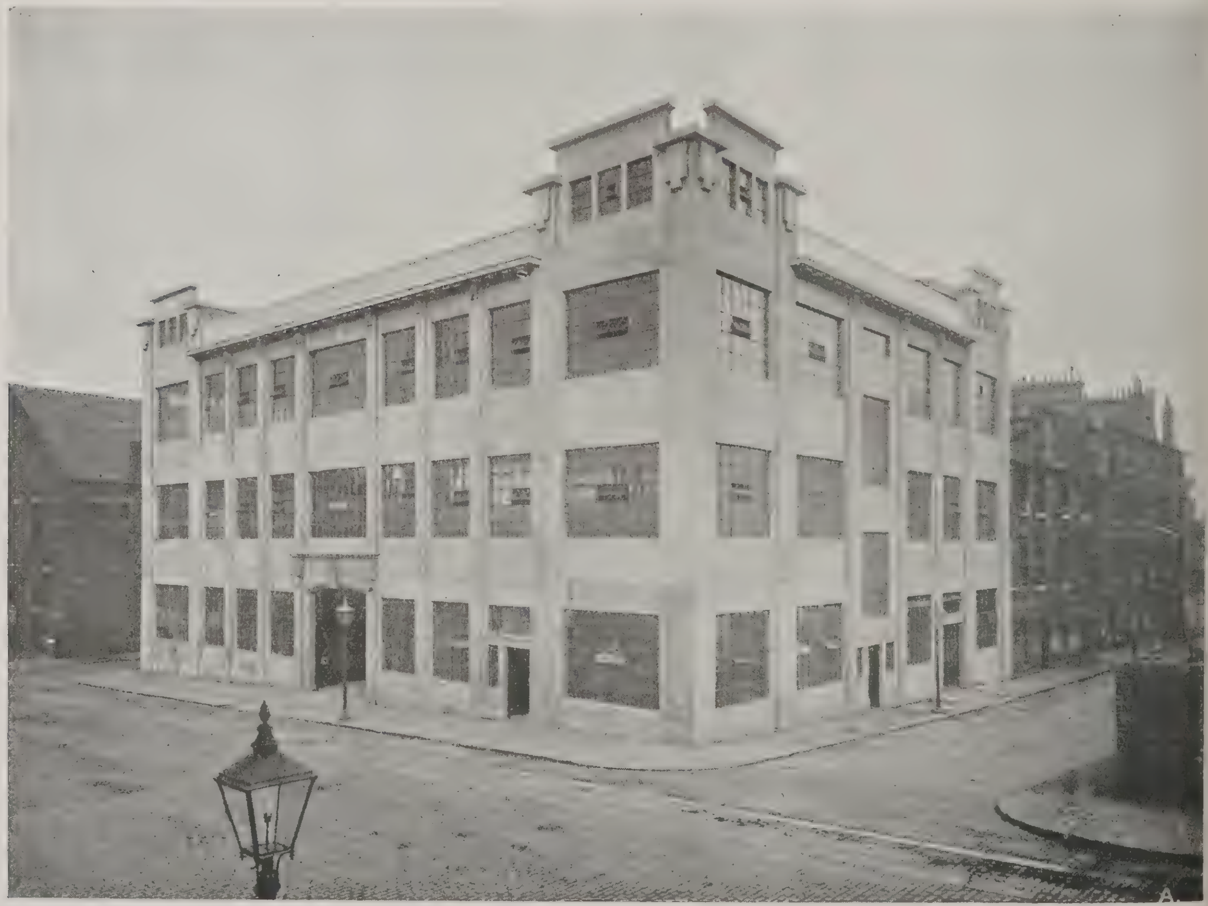
Promotions.

Quirke, Lieut. W. Dathy (A.), tain, R.E.

Solomon, H. (A.), to 2nd Lieut.,

An Architect Inventor of a Co Submarines.

Deserving place in this record name of Mr. W. Henry Bailey Manchester, who claims to have so problem of destroying the immu submarines to attack under water invention of certain alteration adaptations to destroyers, and t vision of accessory means for co submarine attacks. In honour of vention, which was inspired as a r the "Lusitania" atrocity, Mr. Ba been elected as Fellow of the Inst Inventors.



PARKS'S MOTOR WORKS, GLASGOW. RICHARD HENDERSON, ARCHITECT.

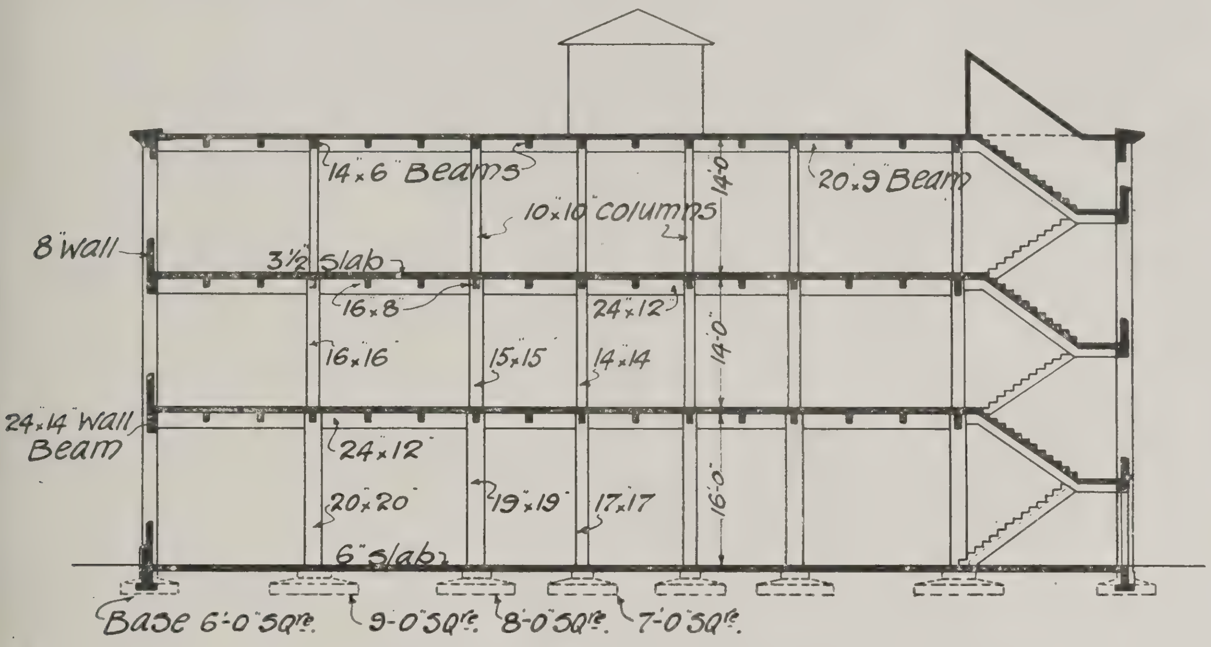
(See pages 251 and 252.)

ODERN MOTOR WORKS, GLASGOW.

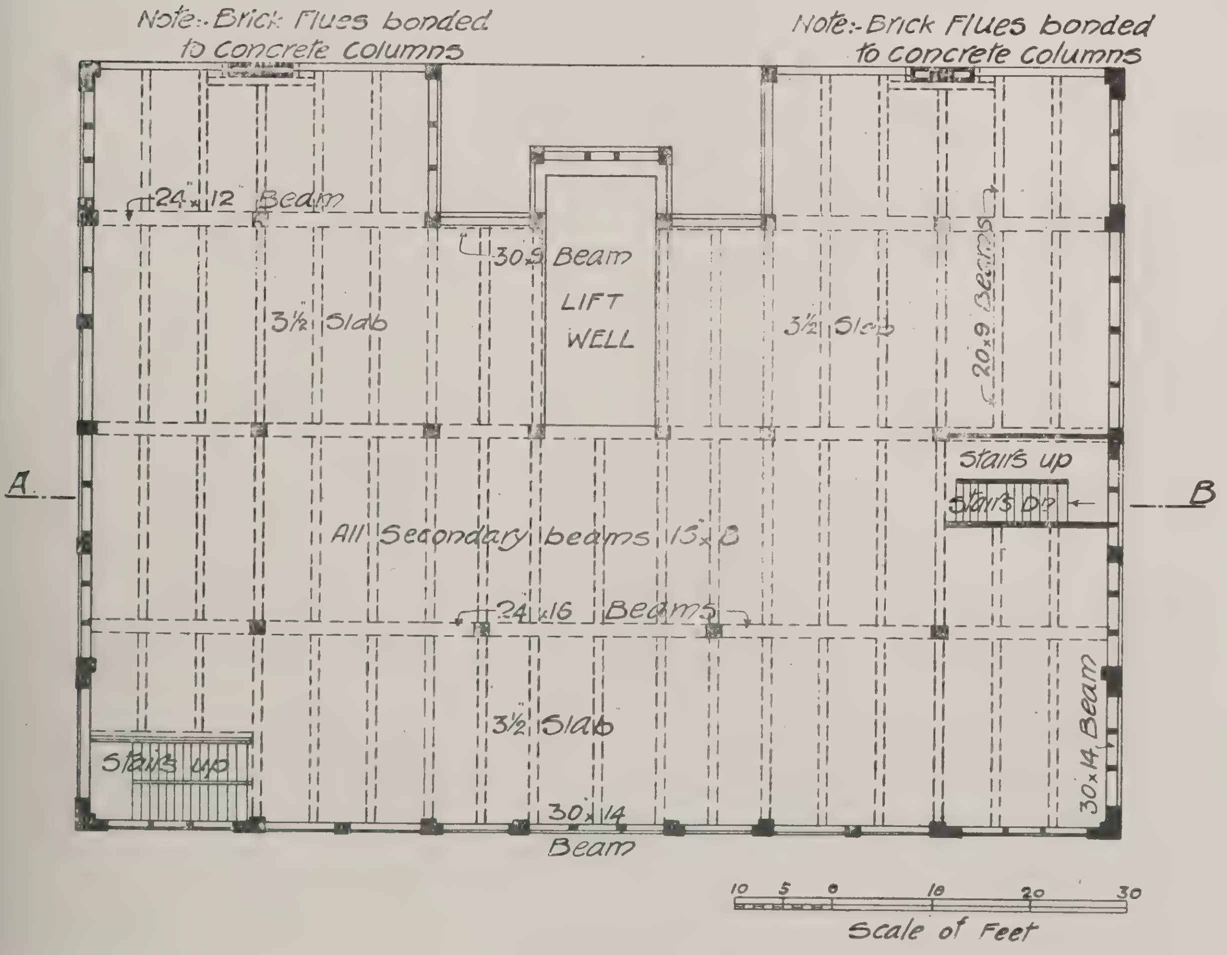
I s building is devoted to the construc- r of bodies for vehicles—principally t cars and vans. The following accom- tion is provided: Ground floor, offices, iy, and receiving store; first floor, ng and general carpenters' and rs' shop; second floor, painting and varnishing shops. In anticipation of future development, allowance has been made for the use of the roof as a floor. The angle features above the cornice level are already utilised as rooms for storage purposes.

As may be seen from the plan reproduced below, access from floor to floor is amply provided for by two staircases and a lift, the latter being used for the raising and lowering of large motors and vans.

The building is constructed of reinforced concrete throughout on the Kahn system designed by the Trussed Concrete Steel Co., Ltd., of Caxton House, Westminster. The construction may be studied from the drawings shown on this page and from the details and sections of beams and column foundations reproduced on page 252. The architect was Mr. Richard Henderson, and the contractors were Messrs. Stevenson and Co., of Glasgow.



Cross Section.



General Plan.

PARKS'S MOTOR WORKS, GLASGOW. RICHARD HENDERSON, ARCHITECT.

NEWS ITEMS.

Change of Address.

Mr. Arthur T. Bolton, F.R.I.B.A., has moved his offices from 28, Victoria Street, Westminster, S.W., to 10, Lincoln's Inn Fields, adjoining Sir John Soane's Museum, of which he has recently been appointed curator.

Royal Institute of British Architects : Informal Conference.

An informal conference on the subject of "Unity of the Profession" will be held at the R.I.B.A. this afternoon (Wednesday, December 5) at 3 p.m. Professor W. R. Lethaby will preside, and Professor F. M. Simpson will open the debate.

White Lead Permits.

The Ministry of Munitions' regulations about the use of white lead are the subject of a letter addressed to Mr. Churchill by the National Painters and Decorators' Joint Council, representing both masters and men. They allege that white lead is being used all over the country without the necessary permit, and that the total amount being used would, if equitably distributed, be of real service to the trade and to property owners.

Rebuilding Belgium.

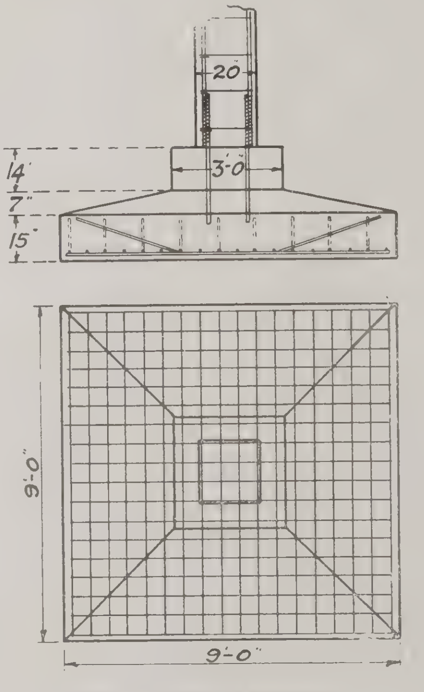
The new Belgian Government Department, of which M. Paul Hymans, the Belgian Minister in London, is the chief, will have for its object, says Reuter, the coordination and completion of the work already accomplished through private and official initiative for studying the problem of the economic restoration of Belgium and to suggest the measures to be taken in order to further its solution. Among other things which the new department will study are the questions of war indemnities, re-equipment of factories, and replenishment of stocks.

Memorial Reredos at King's College Hospital.

The Bishop of Southwark dedicated, on All Saints' Day, a reredos erected in the chapel of King's College Hospital to the memory of Miss Katharine Henrietta Monk, formerly the Sister Matron of the Hospital. The reredos, which is the gift of many past nurses and friends, has for its subject the New Jerusalem (Rev. xxi., xxii.), with Christ in glory, the Throne, the foundations, and the Tree of Life on either side of the river. The work has been carried out in "opus sectile," designed and produced by James Powell and Sons, of Whitefriars, in collaboration with the architect of the hospital, Mr. William A. Pite, F.R.I.B.A.

Temporary Housing in Cheshire.

A correspondent of the "Sheffield Daily Telegraph" states that the chemical firm of Brunner, Mond, and Co., Cheshire, have adopted a temporary scheme for relieving the housing shortage to some extent. A number of single-storied four-roomed dwellings have been erected of wood, with corrugated iron roof. Each is detached and surrounded with its own little "cabbage-patch," and lets at 3s. 6d. a week. For the single men a large w and corrugated iron building has erected, the men being served with m etc., at a low price which just cover th cost. These buildings can be erected small cost, and might do much to " on" until more elaborate houses erected.



Detail of Column Foundation.

Manchester Wages Increase.

By an agreement arrived at betwee Manchester, Salford, and District B ing Trades Employers' Association the Manchester Joint Management mittee of the Building Trades Opera the wages of operatives have bee vanced 1d. an hour.

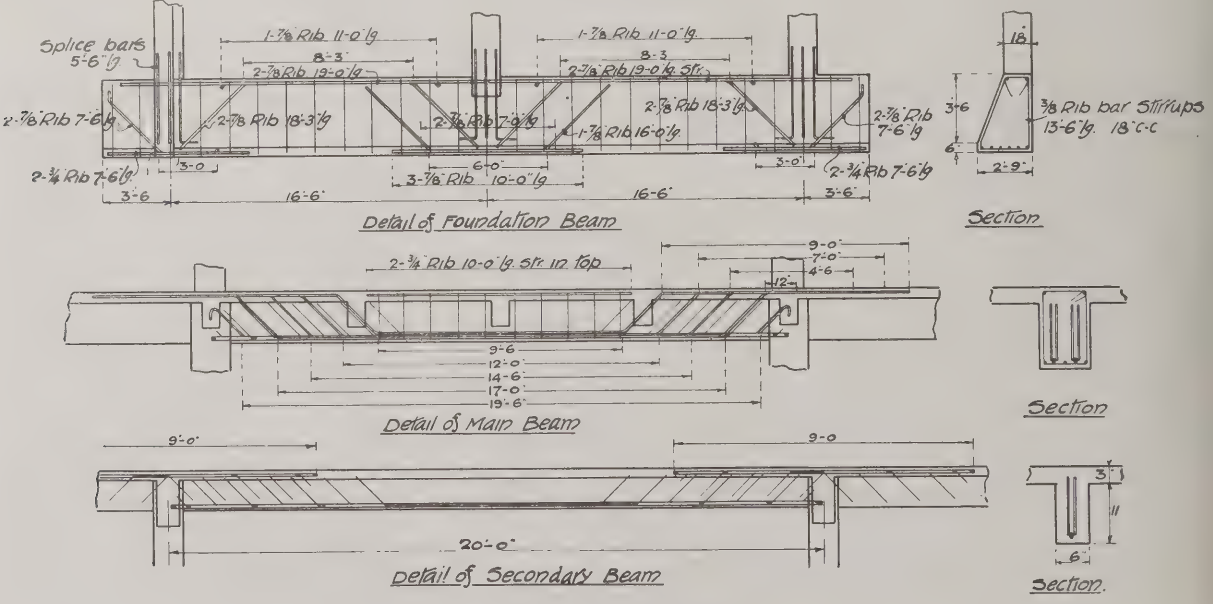
The True View of Cottage Buildi

In an exceedingly well written artic "Country Cottages: The Lost A Building," a correspondent of "T Times" concludes: "To achieve a way of building, the first step is to thi cottage building as the proper field fo expression of artistic ideals and not m the concern of the speculative build that kind of utilitarian who attemp disguise his materialism under the of a practical efficiency which he doe possess."

OBITUARY.

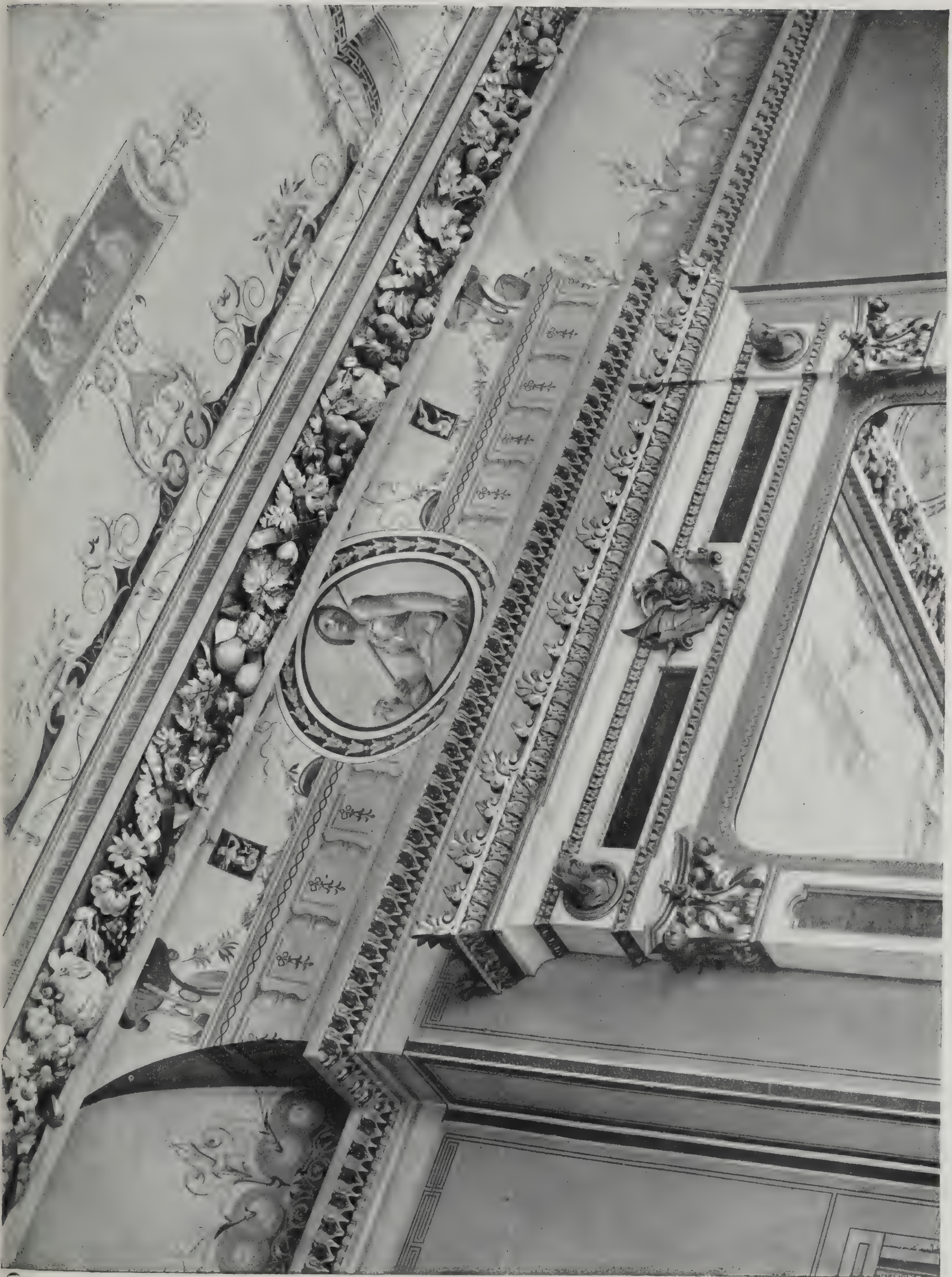
Mr. Joseph Huntley.

The death has occurred at his resi in Rowlandson Terrace, Sunderlan the age of seventy-six, of Mr. J Huntley, a well-known Sunderland bu and contractor. A native of Wo Northumberland, he went to Sunde when a young man, and in 1875 he st business as a builder in Rudland Ter and later established the flourishing cern of the Villette Joinery Works, a ness which he conducted practically the time of his death. Mr. Hu carried out many large building cont and erected a considerable numb houses. He was a prominent memb the Sunderland Master Builders' Fe tion.



Details and Section Beams.

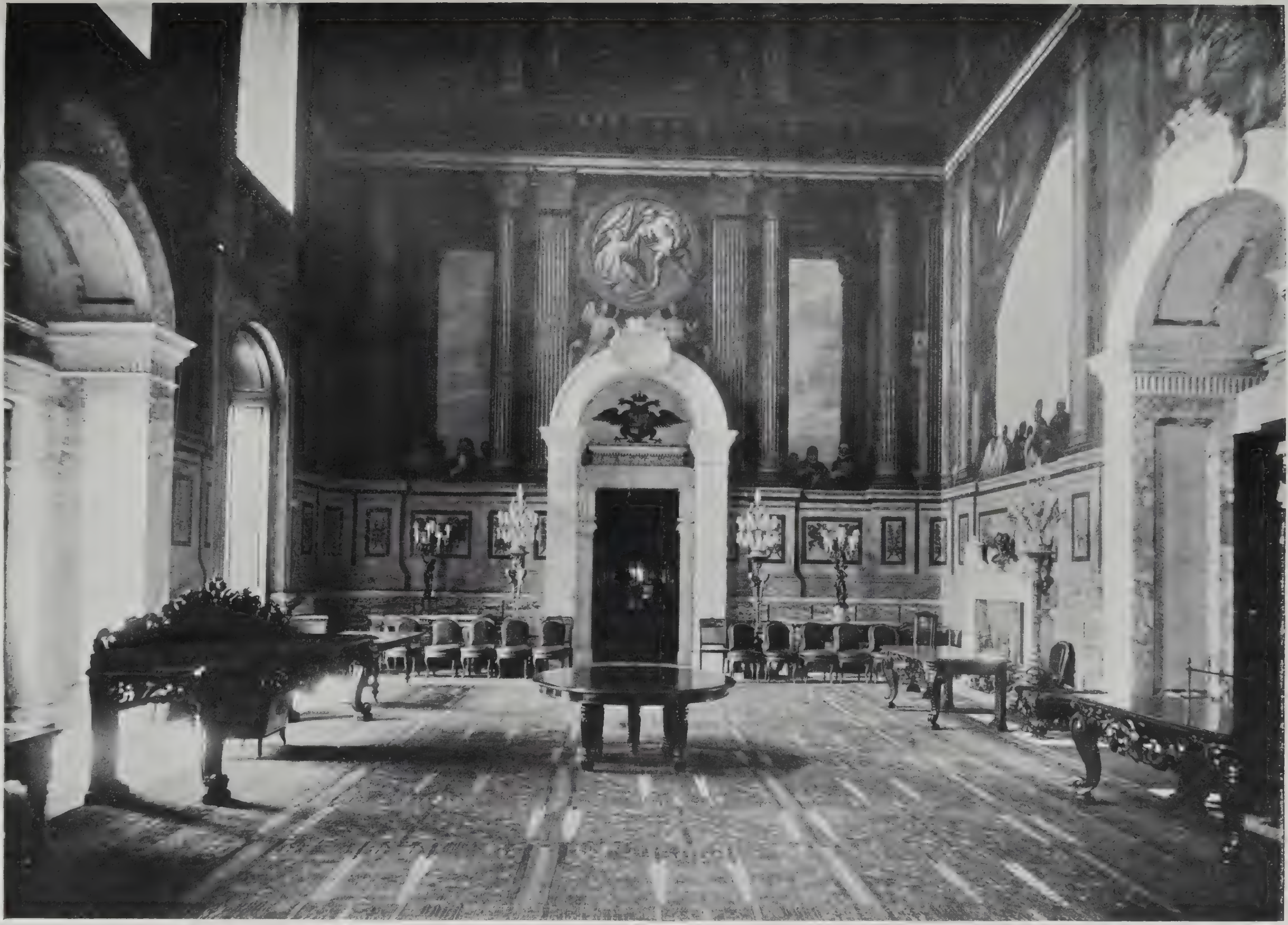
PARKS'S MOTOR WORKS, GLASGOW. RICHARD HENDERSON, ARCHITECT.



DETAILS OF CRAFTSMANSHIP (SERIES II.). L.—DETAIL OF DECORATION OVER CHIMNEYPIECE AT DEYSBROOK, NEAR LIVERPOOL.

BY ALFRED STEVENS.

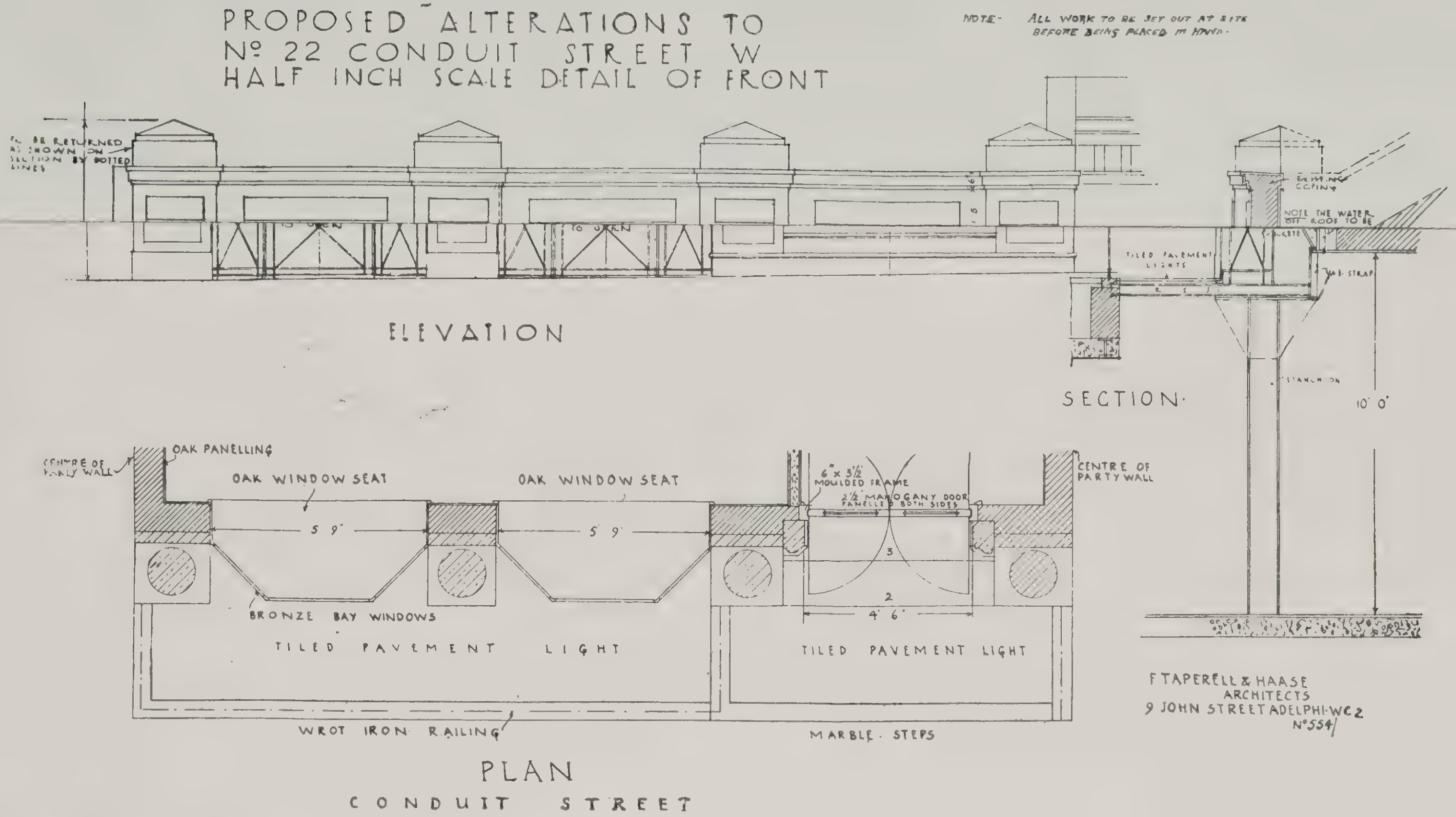
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



MONUMENTAL ARCHITECTURE (SERIES II.). XXXII.—BLENHEIM PALACE, WOODSTOCK, OXFORDSHIRE: VIEW IN SALON.

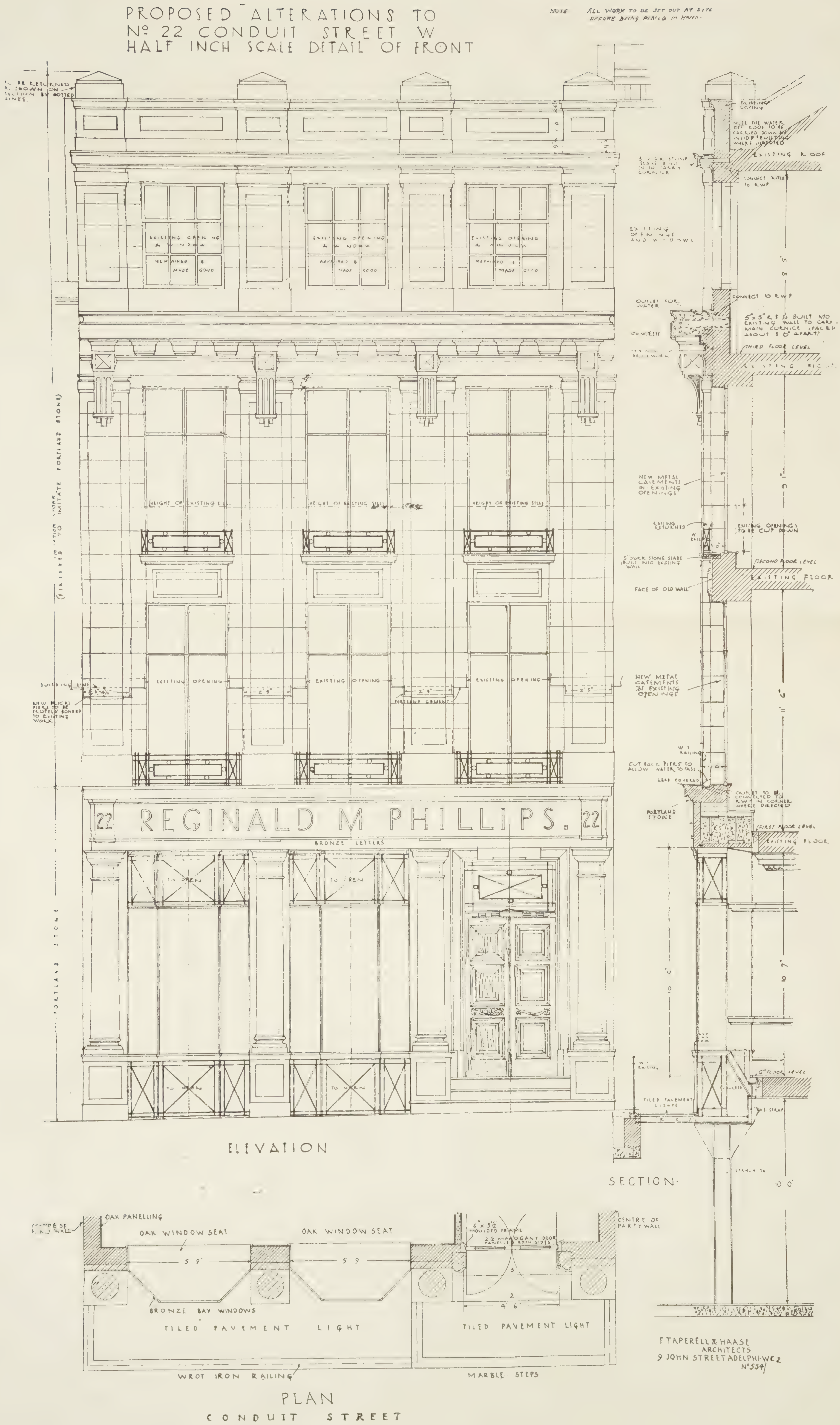
SIR JOHN VANBRUGH, ARCHITECT.

[illegible]



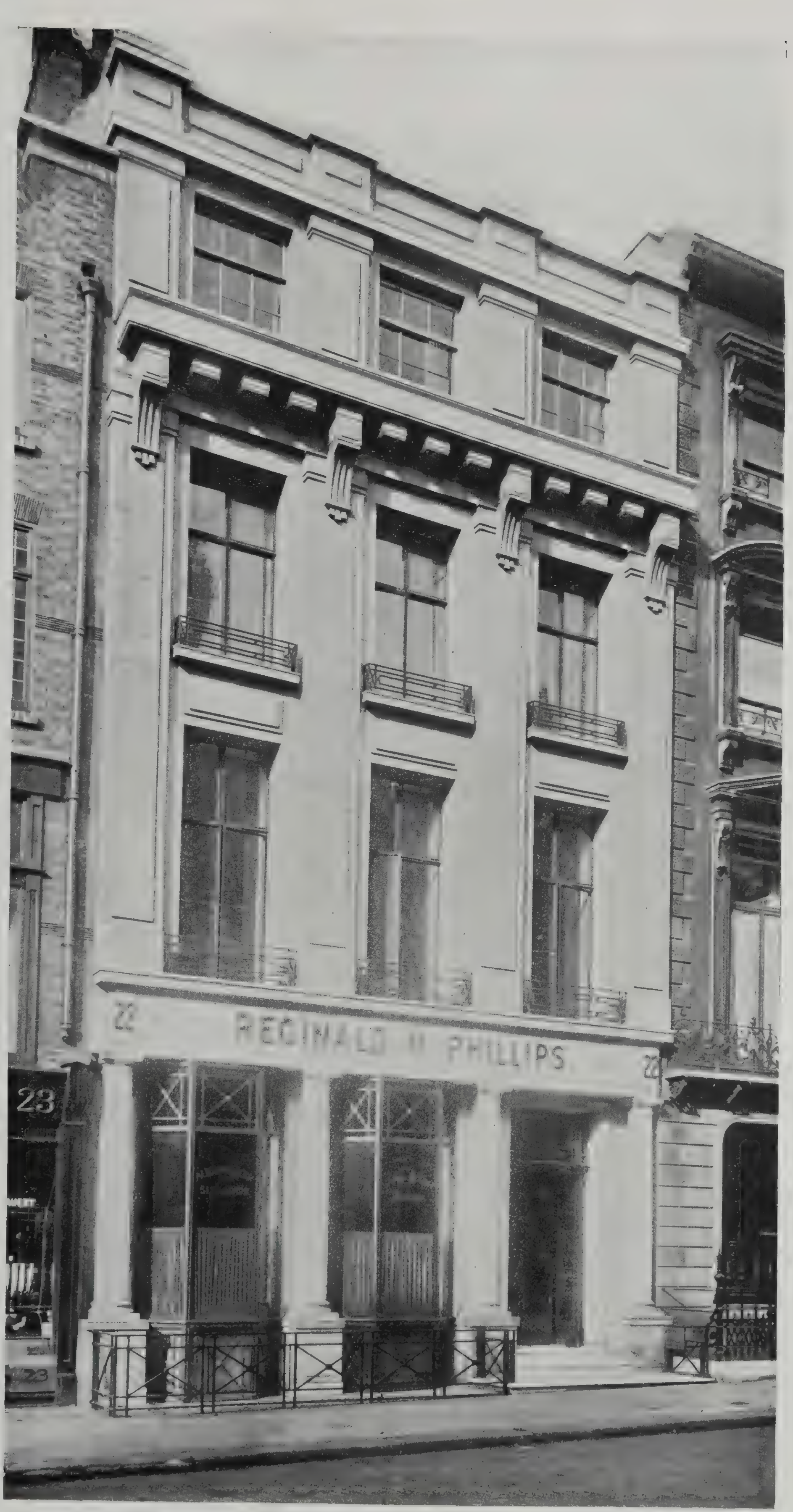
ARCHITECTS' WORKING DRAWINGS (SERIES III.). II.—ALTERATIONS TO No. 22, CONDUIT STREET, LONDON, W.

TAPERELL AND HAASE, ARCHITECTS.



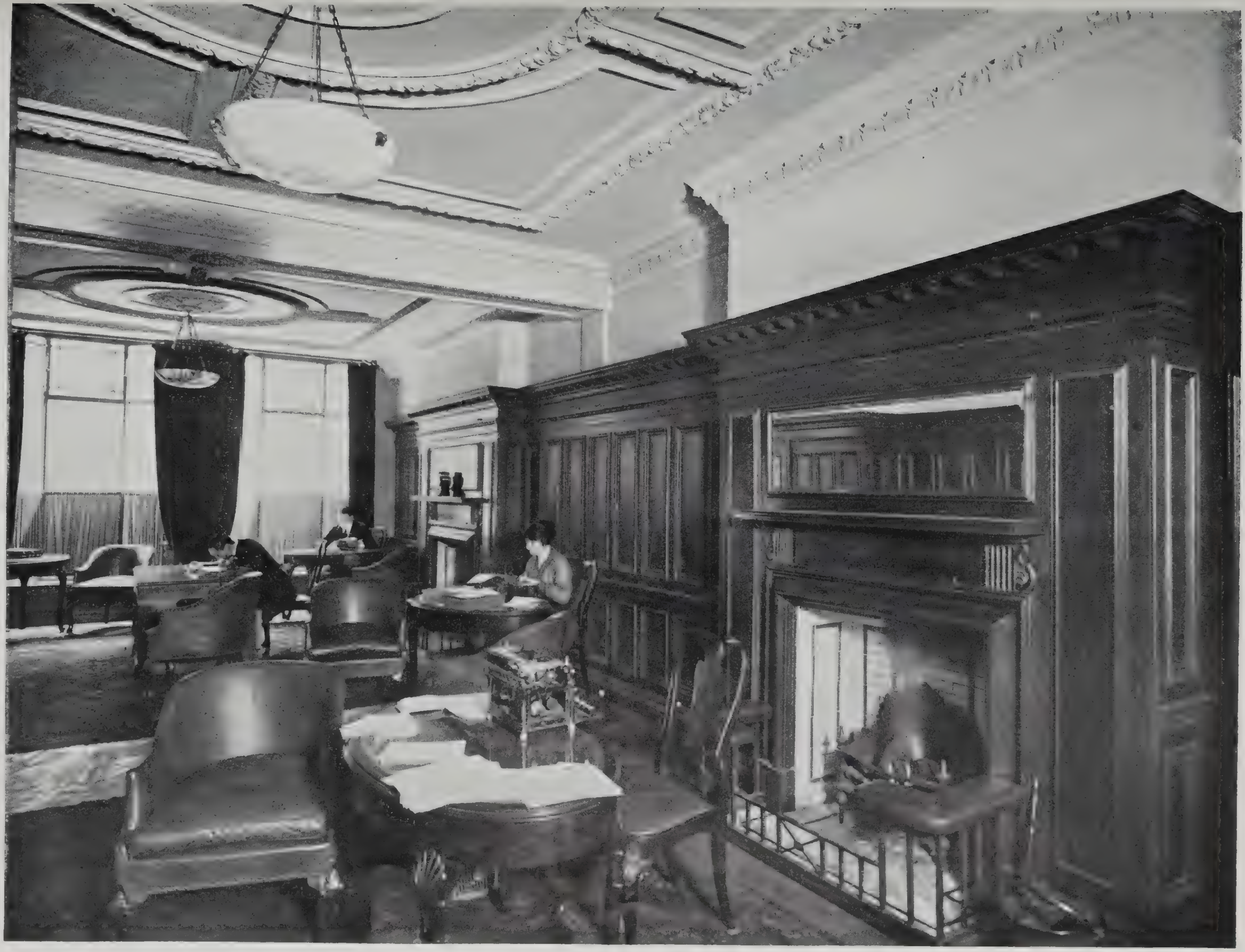
ARCHITECTS' WORKING DRAWINGS (SERIES III.). II.—ALTERATIONS TO No. 22, CONDUIT STREET, LONDON, W.

TAPERELL AND HAASE, ARCHITECTS.



CURRENT ARCHITECTURE (SERIES IV.). XXXVII.—ALTERATIONS TO No. 22, CONDUIT STREET, LONDON, W.

TAPERELL AND HAASE, ARCHITECTS.



CURRENT ARCHITECTURE (SERIES IV.). XXXVIII.—ALTERATIONS TO No. 22, CONDUIT STREET, LONDON, W.: OFFICE ON GROUND FLOOR.

TAPERELL AND HAASE, ARCHITECTS.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

DECEMBER 12, 1917. *TOTHILL STREET, WESTMINSTER.* VOLUME 46. No. 1197.

3UY NATIONAL WAR BONDS.

rticulars may be obtained from any Money r Post Office, your bankers, or the National Savings Committee, Salisbury Square, Fleet t, E.C.4.

TENTION may be drawn to the supplementary particulars which have been issued by the R.I.B.A. in response to questions by intending etitors. Of these addenda, which are printed on r page of the present issue, the most noteworthy extension of time for sending in the designs, ry 31, 1918, being the date now adopted, ently at the request of competitors. It is no a judicious postponement, whether in consideraf the time that is apt to run to waste during the ening Christmas holidays, or of the occasional s in transmission that are inevitable supposing rchitects on war service abroad are competing, trust they are—their case is perhaps contem1 in the decision that the drawings are not to be ted on strainers; while any difficulty that may from the regulation immediately following—that ink is to be used—may be overcome by the y offices of some friend at home, who, through the sion of the date, will have the greater opportunity king-in the pencilled designs. Three other points nay be commended are—(1) that a w.c. may not ced in a bathroom nor entered from the scullery; at the author of a premiated design may make f it in his own practice; and (3) that the assessors the option of recommending further premiums to ns of merit, or of according them honourable on. With respect to (1), no observation should cessary but for the unfortunate fact that the y objectionable arrangement it condemns was rly very common; (2) is mere justice—it would been most galling for the author of a premiated n to find himself debarred from using it, and any exclusion would have been inconsistent with the t and spirit of the competition; (3) should cerhave the effect of increasing the number of nts and of augmenting greatly the supply of ns available for guidance and imitation. These ementary conditions are all to the good, and d certainly tend to make the competition the lete success we all hope that it will be.

* * * *

correspondent whose letter appears on a subsepage suggests a variation in the R.I.B.A. condifor the national housing competition. He thinks t would be an improvement to have separate etitions for the design of elevations, for plans, and ethods and materials of construction. There is to be said in favour of this sub-division, and much st it, but in a brief note it is impossible to go into bject exhaustively. Briefly, we may say at once his appears to us to be one of the innumerable ies that are apt to lose much of their virtue in the ss of reducing them to practice. Specialisation s drawbacks as well as its advantages, and is overdone, and one is very doubtful whether its r application to architecture is either practicable sirable. It is incontestable that a man who is at designing elevations may be weak in planning, ice versa, and that either or both may possess less ledge of construction than another who has a particular bent in that direction; but the "compleat architect" is as well equipped all round as the sound "general practitioner" always is, and we cannot think that the R.I.B.A. would be well advised either on this occasion or on general principles to encourage the specialisation suggested. If a student is markedly better in one department than in another, that is surely a reason why he should be exhorted to aim at a more symmetrical development of his powers, because he will most often be called upon to be self-dependent, and because a building should be an organic whole, one part of it growing out of another rather than being patched on to it by another hand.

* * * *

But the strength of our correspondent's case rests on the exceptional character of the housing emergency, on the undoubted fact that competitions often produce designs that are admirable in the elevation but deplorable in the plan, or vice versa, and on the reasonable supposition that there are many specialists who, knowing much about construction and materials, have so little skill in design that they would refrain from entering a competition in which dexterity in that department is essential to success. To the extent to which they feel this discouragement, their special knowledge will be lost to us, and our correspondent may fairly count this as a flaw in a competition that should search out from all sources the most fruitful ideas available. While, therefore, we do not much like the idea of separate competitions for elevations and plans, we think that it might be desirable to arrange a supplementary competition in which prizes should be offered for the best methods of constructing the houses from the selected designs. Such a competition should be prolific in new ideas, and would be the most effectual means of bringing them to light. It might be made a very practical competition. Money would be well spent in building houses on the methods and of the materials advocated, the final awards being made "on, in, or about" the actual buildings. It would be an expensive undertaking, but would be well worth while. A national housing competition, conducted by the Royal Institute at the request of the Government, should be, we agree with our correspondent, a model of its kind, and should be carried out in the grand manner.

* * * *

Mr. Halsey Ricardo, in a letter to "The Times," deprecates the assumption he gathered from an article in that paper ("Country Cottages: the Lost Art of Building") that architects consider it beneath their dignity to build cottages; and he says that no architect will admit that "to build good cottages no great education is needed, or great knowledge." He does well to contradict these unveracious traditions, which, one suspects, owe their vitality to persistent and not altogether disinterested effort to sustain them. Too many small houses—not merely cottages—are built independently of the architect, with results, inside and outside, that are simply deplorable. And the profession gets the blame for the ugliness, inconvenience, and general unhealthiness, of dwellings with which it had nothing whatever to do. Even Mr. Sidney Webb said that "it was a reproach to the architectural profession whenever they saw a house badly built, and it was a reproach to the architectural profession that any town in the kingdom should be badly laid out." He did not mean, we take it, that the profession did either the bad building or the bad laying out, but that the profession had been lax and timid in failing to act on the realisation that prevention of these things was a part of its function. Mr. Webb knows well enough that the responsibility with which he seeks to saddle us is moral; he would fain have us rise to a higher conception of the duties of citizenship, to which professional skill and thorough organisation should be made tributary. To put the matter baldly, we ought not to allow these things to go by default; nor meekly to leave uncorrected such fallacies as those to which Mr. Ricardo has drawn attention.

* * * *

We commented rather fully last week on Mr. Sidney Webb's very pithy address at the Institute, but one or two further observations suggest themselves. A very large question was opened by his remarks on the right of a profession to prescribe the conditions of entry to it. That may be taken as primarily an oblique reference to the question of registration, and it involves several related subjects, such as education and technical training. It would be dangerous to invest any profession with complete control over such matters, because this power might be used selfishly, with detriment to some other profession or to the community. It would be invidious—and is unnecessary—to specify professions, or "close corporations," in which this abuse is manifest; but it is not at all likely that these bad precedents will be followed—they are commonly regarded as examples for avoidance rather than for imitation. Then, "The professional association ought to regard it as a duty to inform the Government of the professional opinion upon every kind of act done by it on which the profession had a distinct opinion." And the Government ought to listen. But will it? It will, perhaps, if Mr. Webb's further suggestion of a Government professional advisory council in each profession is carried out; but we feel by no means certain on this point. Judging from past experience, it would seem rather easier and safer for a Government to ignore the advice of one of its own departments than to disregard that tendered from outside by an independent body. And as there is always a tendency for system to become mechanical, the net effect of the suggested machinery would probably be the perfunctory production of advice which would pass regularly and automatically straight to the pigeon-holes. Failing advisory councils of unprecedented energy and determination, and a Government with an uncommonly sensitive conscience, the remedy for inattention is clamour—in Parliament and in the Press; and to this end the profession ought to have its member in the House. A development (which may seem grotesque because it is unfamiliar) of this idea is that each considerable profession should elect its own representative to Parliament. Why not, if, as Mr. Webb said, the vocational bond is stronger than that of parish, city, or even country? Some such scheme of electoral reform would certainly tend to make Parliament more truly representative, and would provide the Government with a band of experts always at hand for free consultation.

* * * *

Towards the close of his address, Mr. Webb explained the neglect of architecture in the dwellings of the poor. "Practically all the professions began as a body-service to the rich; they had developed out of that to become the servants of the community, but they had not yet managed to make their service available for the whole of the community." Architecture was a luxury for the rich. Now, surely, the view is broadening. It is not as if the poor were the only sufferers from the ugliness of their houses. Rich persons cannot always avoid ugly and mean streets, and still less can they avoid the ugly and mean
characters which such streets produce. Insa
areas were swept away when it was clearly recog
that they were a menace to the health of the
community. Ugliness and meanness are an e
formidable menace, but this is less plainly discern
moral effects being less comprehensible than thes
are physical and palpable. But while the
are deaf to the appeal for beauty *qua* be
or even for amenity as such, they may
open to another form of approach. What
is was hinted by Mr. Henry T. Hare in
presidential speech a few weeks ago. We must
upon the fact that ugly houses foster inefficienc
even criminality. Mr. Kemp Prossor is proving
said, the soundness of some of his theories as t
curative effects of certain colour schemes; certain
colour schemes having, it may be supposed, the
trary effect. If colour is so potent, is form pro
without influence? "The form, the form alo
eloquent." Mr. Sidney Webb, of course, is not re
sible for this development of his remarks. We r
to him to express our admiration of his characte
ally frank, free, and philosophical address,
indeed, of his fine career of public service.

* * * *

Camouflage, if it continues to develop at its pr
rate of progress, will soon have to be classed a
the fine arts. One may expect to hear of appointm
to professorships in it; and the Artists' Corps m
even now justifying its title by having in a literal
"a brush with the enemy." Lieutenant J. A
Smith, of the Engineering Corps of the United S
Army, gives, in the November issue of the New
"Architectural Record," which has just come to
an interesting account of the gentle art of illustr
his fellow-countryman's line, "And things are not
they seem," or are not what it is hoped they seem
enemy. Naturally he gives away no secrets, but
tents himself with a broad outline of the princ
Camouflage is no new art. It was practised in
hepday of the pirates of the Spanish Main, wh
their quest of "pieces of eight," "golden moid
and other "properties" of picaresque romance,
disguised their "rakish craft" to look like inn
merchantmen; Birnam Wood came to Dunsian
camouflage sense, and the wooden horse of Tro
camouflage on the Homeric scale. As Lieut
Smith says, camouflage "differs only in the degr
the increased powers of the enemy's observation,
the aeroplane, driven by keen-eyed observers
equipped with all-seeing cameras, has raised in
proportion to the vastness and scientific ingenu
the war game. The aeroplane has put the third d
sion into reconnaissance, and the enemy's eye, in
of being restricted to width and breadth of observ
now travels in vertical planes, flashing the sky
incredible swiftness of sight." But the airman h
keep high up out of gunfire range, and it is ther
possible to make appearances deceitful to hi
make the long straight body of a cannon look l
crooked tree trunk, the tents in an encampmen
the trees in an orchard, and so forth. This, how
is mere child's play compared with the scenic e
that are employed in the disguise of acres of terr
Long military roads are screened from observ
from above; and large factories are engaged sol
making the necessary stage properties for constru
whole villages of sham buildings, to screen opera
falsify the lay-out, and confuse the landscape;
has been necessary to re-study form and colour
the new point of view—to use forms and colours
will deceive not only the eye but the camera also.
this gear" the artist whose painting "looks best
distance" comes into his own. But is not the Fu
already an adept at camouflage, the art of ma
things seem confusingly other than they are?

HERE AND THERE.

ERE are those who believe, with the late George
Augustus Sala, that what is once impressed on
the memory can never be erased from it. Pro-
's of "the art of never forgetting" are successful
degree to which they can assist this natural
menon; and their methods, no matter how
e they may seem superficially, must depend
mentally on the skill with which they make facile
atient's inherent power to receive and to repro-
A good memory is "wax to receive, and marble
ain"—as Byron, following Cervantes (perhaps
nconscious effort of the memory), said of hearts
most enamour us"; and one rather suspects that
tablets of the memory" are somewhat of the
cter of a gramophone or phonograph record, if we
due allowance for the tremendous difference
en a living organism and an inorganic substance.
Cook had an inkling of this similitude—she was
ps thinking of the musical box: certainly not of
ramophone, for she was an Early Victorian—
she lilted—

ow cruelly sweet are the echoes that start
'hen Memory plays an old tune on the heart!"

Cook, with her sugary sentimentality, expressed
effectually than any of her contemporaries the
onal spirit of Early Victorian days, and no
stic interior was complete without her portrait,
g down approvingly on the wax fruit and woollen
s of an artless but not a heartless generation.

* * * *

public memories, I am inclined to think, are
away separately from our private memories, and
ther less deeply engraven or are more of a
osest. They seem to be less easily resuscitated;
blic memory being notoriously short. It seems
generally forgotten, for instance, that State aid
using is no new thing. It would not surprise me
n that the germ of the idea was conceived by the
lwellers; but, to go no farther back than 1913,
ew of us seem to remember (the war having
ently driven it—"out of our heads," I was going
, but, remembering Sala, I will substitute "into
ckground") that in March of that year Sir R. L.
backed by the Unionist Party, brought in a B
sing the establishment of a special department
Local Government Board to supervise the opera-
of local authorities under the Housing Acts.
igh the Bill passed its second reading, it had to
hdrawn because the Government of the day
ed the provision of an annual grant of a million
g. How the present Government must envy its
essor the opportunity it so recklessly threw away
ing off so cheaply! Oh, for the leisure to write
it a ballade with the burden, "Our late repent-
osts us dear"! But perhaps there was a sort of
nce in refusing to spend millions that were to be
l for the war. Even in March, 1913, somebody
s Mr. Blatchford may have seen the war cloud on
rizon.

* * * *

e same year a proposal to assist the building of
ottages by lending money from public funds was
jected. I am not shedding any tears over either
ophe. Tinkering preserves in lingering
ency many an old pot that ought to be
ed; and now that the pot is past mending we
eeds get a new one. Housing matters had been
l to go from bad to worse until the need for
reform became not only obvious but imperative,
ate aid offered the only way out of the difficulty.
ourse had "broadened slowly down from precedent to precedent." Municipalities, being in the midst of the famine, were forced to do what little they cou to relieve it. London built some ten thousand tenements at a cost, roughly speaking, of nearly three million pounds, and about the same number of rude remarks from the opposition, who thought that the tenements should not have cost some three hundred pounds each to build, to say nothing of the two million and a half spent on clearing insanitary areas.

* * * *

Other municipalities, notably Birmingham and Liverpool, spent rather heroically on housing, the former going well on towards two millions of money, and the latter having by this time, I suppose, exceeded a million. London, Birmingham, and Liverpool very soon discovered that they were housing, not the very poor who had been cleared out of the slums, but the comparatively well-to-do artisan class. London seems disposed to let it go at that, but Liverpool has come very near to a solution of the problem of rehousing the very poor. On Gildart's Gardens it built a number of cottage flats which could be let at a shilling a room; but later experiments have been more expensive, and the corporation has had to recoup itself out of the rates. Birmingham could not, apparently, get the cost down lower than eighteenpence a room. What has always struck me about all this striving for bedrock bottom rents is the pity of it that so many thousands of persons are unable to pay more than a shilling or eighteenpence a week in rent, and that, as a direct consequence, there has been much mean building. There, indeed, is a large hole in the social saucepan, and I have always felt that there is no use in tinkering with it. As Professor Adshead has said in his valuable lectures at University College, we want not only more houses, but better houses; and we do not want to build down to low wages, but to raise wages to the level indicated by the cost of decent housing.

* * * *

Housing experts were not slow to diagnose the case. One of them wrote, years ago, in accounting for the dearth of labourers' cottages, "The lowness of wages is probably the chief cause, since the small rent which it is possible for the labourer to pay offers no temptation to the builder." Philanthropy has, on the whole, tended to complicate the problem rather than to solve it. Peabody, Guinness, Sutton, and other trusts, have always striven—with very honourable motives, no doubt, in spite of the jeers about "philanthropy and 5 per cent."—to put their tenements on a paying basis, so as neither to pauperise the tenants nor to compete unduly with private building enterprise. But, private enterprise having been, in one way and another, brought to a standstill, the State has been at last forced to step in, and to take over popular housing in much the same manner and in much the same circumstances as it had to take over popular education. It had to make elementary education free. To suggest that in process of time it will have to make working-class dwellings rent-free would be to lapse into cynical humour. Also the contention that the workers will never be really satisfied until beverages stronger than water are delivered to them from the main is too strained an effort to push things to a logical conclusion; but I must confess that I am rather enamoured of the idea put forward by Mrs. C. S. Peel in her breezy book on "The Labour-saving House"—that hot water as well as cold should be supplied from a central source. During the present cold snap the idea is specially alluring. But imagine the hot-water main bursting, and the augmented minor facilities for getting into hot water!

DIOGENES.

HOUSING PROBLEMS AFTER THE WAR.*

BY PROFESSOR S. D. ADSHEAD, M.A., F.R.I.B.A.

IN considering the development of the modern industrial town, and the making of its community since it severed its inherited associations with the land, we must remember that the forces that have brought about these great changes, though not new, were, during last century, so powerful, that we may describe them as revolutionary. Whereas up to the commencement of the nineteenth century agriculture had ever been the staple industry of Great Britain; it is now the manufacture, or rather the production, of machine-made goods of all kinds, and it is only by keeping clearly in our minds the nature of the great changes that brought this about that we are enabled to understand the difference between the social structure of an old country town like Chester and that of a manufacturing town like Manchester. And whilst on the one hand the nineteenth century saw the English villages which continued to subsist on agriculture fossilised, on the other hand it saw those villages which had supplemented their meagre agricultural earnings with earnings derived from the weaving of cloth rapidly converted into manufacturing towns, and this more particularly where mining, shipping, and railway communications lay close at hand.

The Soulless Century.

So rapid was the transformation, so confined and yet so strained the outlook and so detached the movement from those inherited conditions of existence which we call traditions, that the nineteenth century may be described as a period in the world's history when the circumstances of man's environment were such as to stultify his imagination and debase him to the level of a machine.

The nineteenth century produced wealth, but in doing so it lost its soul. And in regarding it in this light we see how those movements for social reform set on foot about the middle of the last century with the object of improving the condition of the working classes, and which, commencing with prison reform and the founding of hospitals, and following with housing reform, have to-day culminated in town planning.

Mills in the Valleys.

But let us examine in detail the circumstances of this great industrial upheaval.

I pointed out in my last lecture that so early as the fourteenth century spinning and weaving were carried on by the labouring classes in many of the villages in order to supplement the earnings by agriculture. The cloths so manufactured were bought by the merchants in the towns, largely for shipment abroad. The importation of cotton from America, and of wool from Spain, brought about by the sudden expansion of trade during the eighteenth and nineteenth centuries, together with improvements in machinery and the introduction of steam power, were the means of rapidly developing the manufacture of articles of all kinds, and in particular of transferring the manufacture of cloth from the cottages to the mills, and this more especially in those districts where handicrafts were carried on.

The first mills to be erected were situated by rapidly running streams, for they were dependent upon water power. Later, with the introduction of steam, they needed water for washing and condensing, and close connection with a canal or railway was always desirable.

Thus, from the earliest advent of the factory, mills were situated in our most beautiful valleys, in our dells, and on the borders of what were once our most beautiful streams.

Organising the Factory System.

When the factory system became more comp organised, factories were erected in close assoc with one another, and a series of mills would s along a valley, and be linked together by a ra forming a continuous chain of smoke boxes, with of cottages as appendages. This was the arrangement of the earliest factory assembly. B must remember that whilst these purely indu villages were rapidly monopolising the va polluting the streams and blackening the co around, many of the old towns and villages from they usually radiated were rapidly developing a markets and exchanges, with warehouses, cou houses, offices, shops, and business premises of description. They were the focal points of the fa communities around.

In some cases so rapid would be the develo that the body of the octopus soon became insepa from the tentacles.

Development of Manufacturing Towns.

Now it is outside the scope of our inqu dwell at length upon the final development manufacturing town. Suffice it to say that later stages of development its market centre surrounding factory area became more and involved in their dependence upon one an Indeed, as manufacturing towns develope their influence spread, a whole series of towns group themselves into one gigantic whole. In cashire, for instance, whilst spinning is carried the southern districts about Bolton and Manch where different towns produce different qualit yarns, in the northern districts towns like Pr Darwen, Blackburn, Accrington, and Nels engaged in weaving, and each specialises different quality of goods. And not only doe make its separate contribution to the total and combine (though doubtless by force of ci stances) in marketing and shipping, but this conurbation has in Blackpool and the Isle o its organised recreative and holiday resorts.

Together they make up the great Cottonop the North: a congeries of some fifty towns, combined industries would some two hundred gone by have been carried on in one small though in a much more elementary and mo way.

But whilst the description I have given development of a manufacturing town refers ally to those towns engaged in the cotton ind it is equally applicable as regards wool and and this in so far as that development took along valleys, and separate undertakings gr themselves in a chain. Indeed, the same con apply to the steelworks of Cleveland in the Riding of Yorkshire, to the tile works of the valley, to the potteries of Staffordshire, and shipbuilding yards in the Clyde.

Change in Social Conditions.

But let us return to the social conditions operative, as we see him removed from his village, his ancestral home, and engaged in s up spools in a mill.

Whilst at first the operative was the cottage the surrounding neighbourhood, it was not before he was housed in long rows of one-sto two-storey cottages in close proximity, in fact a ing the works. To-day these cottages would b sidered to be insanitary as regards refuse di and water supply, and later, when in many came to be three storeys in height and were ezed closer and closer together, unhealthy as rds light and air.

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* Portion of the third of a series of six lectures now being delivered at University College, Gower Street, W.C.1.

ut during the latter end of the eighteenth and o the middle of the nineteenth century they were o means devoid of all architectural interest, as slums of Liverpool can testify.

here exists to-day in Etruria a group of teenth-century cottages and works in the eries, an eighteenth-century manufacturing ige, which displays in its door architraves and ils all the architectural refinements of the od, and similar groups which were the begin- gs may be discovered in the heart of most manu- uring towns; though in most cases their architec- l fronts are backed by unhealthy courts and they become the slummiest of slums.

An Early Demand for Housing Reform.

was in the 'fifties and 'sixties of last century that e first rang through England a great outcry for sing reform, and in the Shaftesbury Act and the t Public Health Act of 1875 we get the first onal acceptance of the essential need for it.

(*To be concluded.*)

CORRESPONDENCE.

National Housing: R.I.B.A. Competition.

the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

IRS,—Architects will no doubt welcome the idea of Local Government Board calling in the R.I.B.A. to st in the solution of the housing problem.

he Board appear to have given the R.I.B.A. an olutely free hand, and a very liberal sum of money. ow remains to be seen whether the R.I.B.A. will ify the confidence which has been placed in it. In epting this invitation the R.I.B.A. has accepted a at responsibility.

t is to be hoped they have fully realised this. urally, all who have interested themselves in pre- is housing questions will expect great things from an eminent body; therefore, it is most important he profession that the methods adopted do not ilt in failure. Failure, of course, would be a istrous blow to the profession; yet, judging from conditions of the competition which have been ed, I am afraid that failure is inevitable, and that refore the result will in no ways be commensurable the lavish amount of money expended. What a rious and unique opportunity the R.I.B.A. have own away! With its experience of hundreds of vious competitions one is entitled to a far better nagement than the commonplace method which has ar been displayed.

When one considers the magnitude of the problem s most essential that the very best possible plan is ured, the very best form of construction, and the y best design. I emphatically say that this is abso- ely impossible in our competition, and this is why m pessimistic about the result. I consider that to ain the best possible results there should be three npetitions for each class; that is, one for the plan, for design on the selected plan, and one for con- iction on the selected plan and design; in this way the brains at work would be concentrated on one ng. Of course, I am quite aware that, from a pro- sional point of view, there are objections to my three npetitions idea, but in this case the main objections ave in mind do not apply, for all designs premiated ome the property of the Board of Trade, who, in my nion, are entitled to a good deal more than they are ely to get under the methods adopted.

D. J. ROBERTS, A.R.I.B.A.

THE PLATES.

Gate to All Souls' College, Oxford.

THIS very fine example of seventeenth-century ironwork is commonly attributed to Tijou. It has much of his characteristic manner, but documentary evidence of his authorship is lacking.

Architectural Ideas in War-Time.

That each factory or workshop should have its own power-producing plant seems to be an unnecessary duplication of machinery and labour; it also tends to create a very serious drain upon our coal and water supplies. There is a growing consensus that a solution to this problem may be in the creation of power supply centres, situated near to coal districts, and in close proximity to large and unlimited water supplies. Manufacturing counties could be sub-divided into districts, and each district could have its power supply station, from which power would be transmitted to distant points, supplying the great factory combine or the individual craftsman at a charge per unit of power used. This may seem, at the first glance, to be purely a question for the engineer; on closer study, however, it will be found to have a very direct influence on the architecture of buildings utilised for the purpose of manufacture. The general appearance of the factory would be improved by the omission of the ugly chimney stack, with its adjoining engine-house, grimy coal conveyors, and bunkers. In the selection of a factory site there would be fewer limitations. Factories would not necessarily have to be built in the already congested river valleys of our manufacturing districts. The smoke nuisance would be eliminated to some extent, to the advantage of the health and comfort of the workers. In fact, with a centralised power supply, the danger of factories becoming unsightly and objectionable would be minimised. The power station would be monumental in character and worthy of its purpose. It would occupy a commanding site, and have the same study bestowed upon its lay-out as would be given to a civic or Government centre. The public would be admitted at all times to view the plant in motion, from promenade galleries circulating throughout the whole building. The vistas in the machinery and boiler halls would give the architect a chance to use a dignified treatment in design and detail. The entire project would have the same significance and importance as a large public building. The power supply station would be a monument to commemorate the victory of co-operation in industry over the individualism of the past. Mr. Alex. T. Scott has expressed his conception of such a building in the drawing which is reproduced on one of the plates in this issue.

The Great Gallery, Blenheim Palace.

The obvious fault of this apartment is that it resembles a corridor rather than a gallery: it is much too high and much too narrow. Its bad proportions, however, are largely due to the dictates of the Palladian manner, of which it is a fairly typical example.

The Grand Theatre, Moscow.

The Grand Theatre, Moscow, erected in 1854 from the designs of Cavos, is, on the whole, a very dignified composition. Exception may be taken, however, to the arrangement of the two large pediments one above the other, a treatment obviously inspired by Schinkel's Opera House in Berlin.

Balcony on the Palace of Fontainebleau.

Fontainebleau onwards from the Middle Ages was one of the chief residences of the Kings of France. It has fortunately survived the many vicissitudes of the French Royal dynasties, and almost every monarch from the time of François I. has left his impress upon the buildings. The Palace affords a comprehensive survey of the various phases of French Renaissance architecture.

COMPETITIONS.

Housing of the Working Classes in England and Wales: R.I.B.A. Cottage Competitions.

January 31, 1918. COTTAGES FOR HOME COUNTIES AREA.—The conditions of this competition were given on page 220 of our issue of November 14. It will be noted that the time for sending in designs has been extended to January 31, 1918, on or before which they are to be delivered, carriage paid, to the Secretary, R.I.B.A., 9, Conduit Street, Regent Street, London, W.1. There are offered three first premiums of £100, three second premiums of £50, one first premium of £50 and one second premium of £30.

The following supplementary particulars, in response to questions by competitors, have been issued by the R.I.B.A.:

1. The floor areas given apply to all classes, and are to be nett area clear of all projections. The floor of living-room should have an area of not less than 180 ft.
2. The heights of storeys may be from 7 ft. 6 in. to 8 ft. in the clear. Bedrooms may be partly in the roofs, but not less than two-thirds of the ceilings must be of the maximum height; and the vertical walls must not be less than 5 ft. high.
3. The bath should be fixed and not of the tip-up type. It is not essential that a separate bathroom should be provided. The w.c. should not be placed in the bathroom or entered from the scullery.
4. No drainage need be shown, and it may be assumed that access to the houses is from both front and back, and no gardens or plans of site need be shown.
5. No alternative plans will be allowed.
6. All drawings are to be drawn with the long dimension of the paper horizontal, and each class is to be clearly marked A, B, C, or D, as the case may be.
7. Each class is to be shown on a *separate* sheet, and the classes may not be intermixed.
8. The drawings are not to be mounted on strainers, and are to be in black ink, with a black wash over the window openings. No perspectives are to be sent.
9. The time for sending in designs is extended to January 31, 1918.
10. The fact of a design being premiated will not prevent the author from making use of it in his practice if he so desires.
11. The two elevations asked for may be such as the competitor thinks will best illustrate his design.
12. The assessors in each competition will have the option of recommending designs of special merit for further premiums (or honourable mention) in addition to those stated in the conditions.
13. Each of the Classes A, B, and C is to be designed as a block of five or six houses, of which three are to be drawn in detail, the others in outline only. Of the three which are to be fully drawn, one is to be an end or semi-detached house, another a terrace house between party-walls and lighted front and back only, with frontage of 18 ft. from centre to centre of party-walls, and the third to be a house one room deep only, with long frontage at the discretion of competitor. The grouping or composition of the block may be arranged in any way the competitor desires. A section of one house in each block, if sufficiently explanatory, is all that is required.
14. It may be assumed that water supply is available.
15. A committee of assessors will be appointed by the Architectural Societies in each area.

The following points are given as desirable, but are not to be regarded as essential:

Staircase should have direct ventilation.

Coals should be accessible under cover, and accommodation should be provided for at least one ton.

Scullery should be large enough to serve as a relief to living-room, but not large enough to take centre table.

January 13, 1918. COTTAGE DESIGNS FOR SOUTH WALES.—Designs are wanted for four specified types of cottages suitable for the industrial classes in the South Wales area. A competition, under the charge of the R.I.B.A., will be held, and premiums of £100 and £50 for the best designs of each of three types, and £50 and £30 for the fourth type, are offered. Copies of conditions from Mr. C. H. Kempthorne, hon. sec., South Wales Institute of Architects, Albert Chambers, High Street, Cardiff. Designs to be submitted not later than January 13, 1918.

ARCHITECTURAL ASSOCIATION OF IRELAND.

Mr. R. C. Orpen on "The Tyranny of Fashion."

The lecturer started by endeavouring to define what the word fashion implied. He stated that the subject index in the National Library afforded him little help—"Fashion, see Costume," which was not at all what he desired to see. He endeavoured to give a definition: "Fashion is the outward indication of varying taste." The lecturer asked, Whence comes the power which controls the various changes in taste which fashions indicate? He found the answer in the fact that intelligent beings are impelled to change that which by its familiarity has become contemptible, and concluded that the authority which ordains our fashions is found in the collective minds of men. He regarded the tyranny of fashion as a benevolent tyranny, which modifies the monotony of life, which rescues us from the dull water-ways of the common-place and launches us on the wide river of adventure.

He said that, in regard to Art, every departure from accepted standards had its pioneer; some adventurous spirit, who, finding the circle of convention repressive, steps outside, becomes a transgressor, and, as such, finds the way he desires to travel hard indeed. Pioneers, be they a Wagner or a James McNeil Whistler, must face hostility from two sources, from those who cling to their old creeds and resent any tendency to disturb their repose, and from those camp-followers, ever an increasing host, who desire to be "in the new push," but are themselves totally unequipped.

He attributed the present fashion in architectural taste to the rise of University training. He said there was no style of architecture which so readily afforded a groundwork for the lecture theatre or studio. The Greek type was adopted for academic teaching as the most conformable, as it were, to grammatical rule. He concluded by pointing out the great incentive to young architects of a change of fashion in type which synchronises with their entry on the field. They find it delightful and stimulating, and believing it to be the true national and logical style long expected become whole-hearted disciples. Such faith can alone produce the best art.

EDINBURGH ARCHITECTUR ASSOCIATION.

"Sculpture, Nationality, and Wa Memorials."

Dr. Pittendrigh Macgillivray, R.S
delivered last week before this associa
a lecture under the title of "Sculpt
Nationality, and War Memorials."
keynote of the discourse might be ter
"Art, the Manifestation of the Soul
People." From that standpoint
lecturer urged that each nation must
out its own salvation in the various
arts and avoid allowing himself to be
the mere recipient of art creations f
outside or alien hands. Considerable
dence was put forward in support of
statement that in its higher ranges s
ture could scarcely, after a hundred
of effort, be said to exist in Scotland.
art apparently suffered with us from la
public encouragement and from the p
mity of "octopus London." The fact
our National Gallery was without a sc
ture section, and, with the funds at its
posal, had done practically nothing
sculpture, was commented on. The
position of the Board of the Gallery
severely dealt with, because of its b
with one exception in the hands of
men. It was stated as an extraordi
fact that the Board have recently been
appointed for a third term of five y
solely on the authority of the Secretary
Scotland. A suggestion was put forv
for a more unimpeachably representa
and better qualified Board, the majorit
which would be painters, sculptors,
architects. The apathy of Edinbu
towards the fine arts was exemplified by
experience of the R.S.A. in connection
its exhibitions. Within the last th
years, the annual return from these
gradually fallen to one-half, and until
Academy stands to-day with a deficit
its liabilities of £700.

The suggestion was made that as th
exhibitions are largely of the nature
high-class communal benefit to Edinbu
the debt arising from them might wel
cancelled out of the City's Common G
Fund. It is argued that as the city
spent nothing on works of art it would
graceful act to requite the Academy for
sacrifices its members have made for w
properly regarded, is a great source
public enlightenment and refinement.
a stirring and most interesting manner
lecturer dealt with his main them-
nationality and its relation to the m
abstruse matters of art expression and
dividuality. He showed that great art
been at all times the outcome of a str
sense of nationality, acting through art
whose strength lay in their being,
birthright, a medium of the soul of th
people. In connection with war me
rials, a forcible contrast was dra
between the Latin and Teutonic works
the kind. It was claimed that the mot
of the former were on the side of
angels; while those of the latter appea
dedicated at the altar of force and ma
rialism, and were morose and brutal
character. The genesis of the French
Italian monuments was to be looked
in the clear and rhythmic things of anci
Greece and Rome, while much of
recent war monumental art of Germ
seemed to derive from the colossal
massive work of Egypt and Assyria. T
"Battle of the Nations" monument
Leipzig was instanced as perhaps the m
objectionable creation of the kind in
world and an example of what to avoid.

WAR · BVILDINGS · SECTION

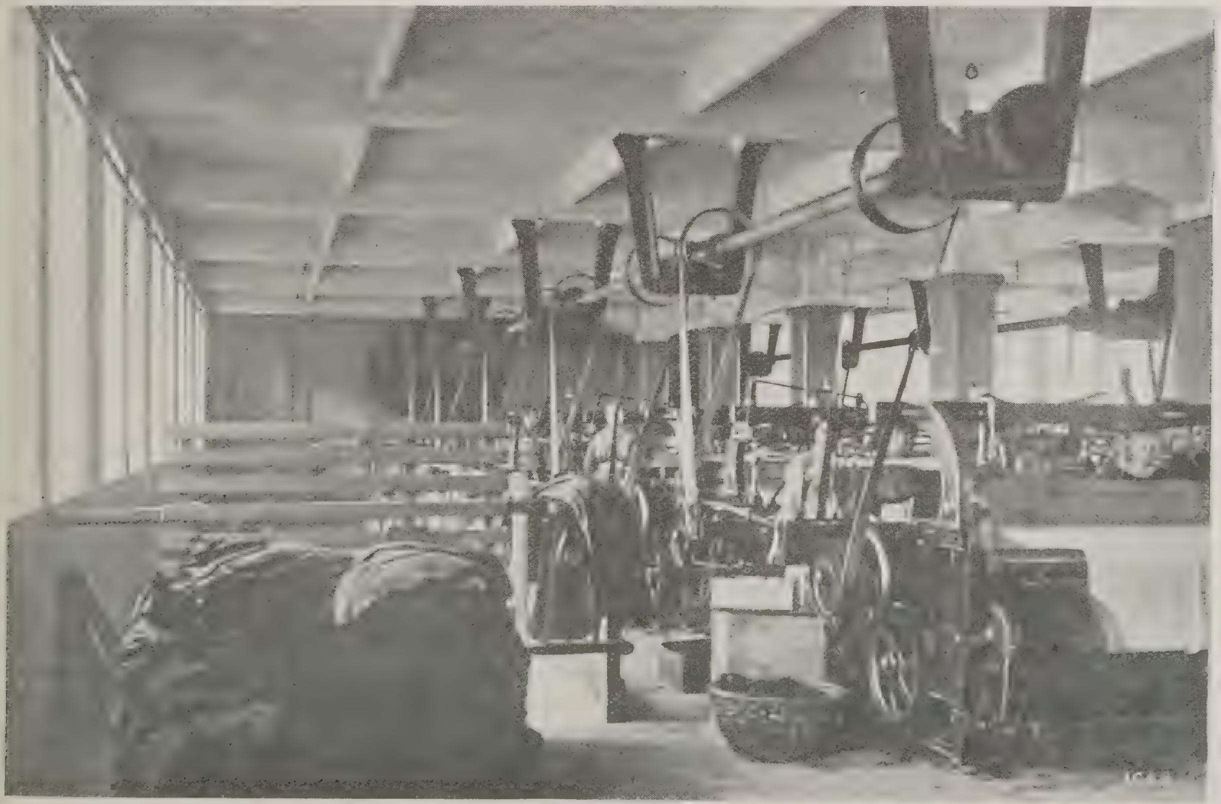
NEW WOOLLEN MILL, PEEL MILLS, MORLEY, YORKS.

IE four-storey mill premises here illustrated have been erected for rs. W. and E. Jackson, Ltd., to re- buildings destroyed by fire in June,

The structure is one of very con- able interest, showing the possibility ombining in one work other methods onstruction in conjunction with re- ced concrete.

e external walls are of brick, faced with double pressed brick, the heads, sills, and other dressings being in local brown stone; all lintels are in reinforced concrete.

The ground floor is finished in concrete, with pits for milling machinery. The first and second floors are of reinforced concrete, 105 ft. 6 in. by 53 ft. 9 in., and consist of 4-in. slabs supported on 12-in. by 4-in. secondary beams and of 17-in. by 10-in. main beams finished with floor boards. There is one row of columns down the centre, 20 in. square on the ground floor, and 16 in. square on the first floor, with 7-ft. 6-in. square footings. The load from the main beams is distributed on to brick piers in the wall by reinforced concrete padstones. These floors are designed to carry a load of 2 cwts. per square foot. The third floor is formed



Note attachment of machinery shafting to reinforced concrete beams.

WOOLLEN MILL, PEEL MILLS, MORLEY, YORKS. T. A. BUTTERY, ARCHITECT.

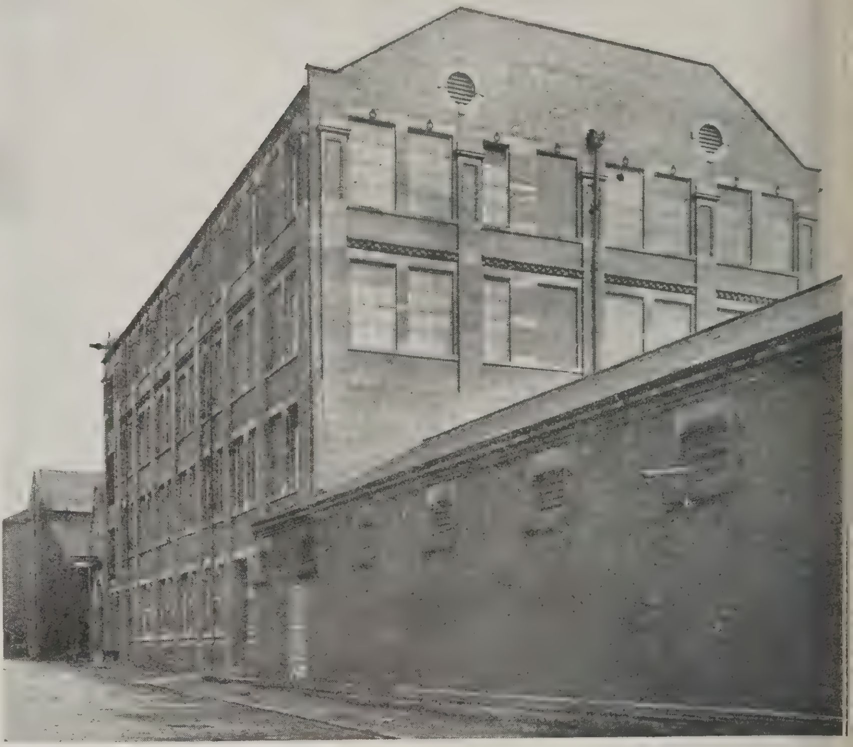
with rolled steel beams and redwood floor joists and boards, supported by cast-iron columns.

The roofs are double timber trusses, supported under the centre gutter by cast iron columns and covered partly with green Westmorland slates and partly with patent glazing. Steel windows by Messrs. Henry Hope and Sons, Ltd., Birmingham, are used throughout.

The main stairs are of stone and the auxiliary stairs are of oak. An engine-house with a roof of reinforced concrete adjoins the mill.

The contractors for the building were Messrs. H. Arnold and Son, of Leeds and Doncaster. Mr. T. A. Buttery, of Morley and Leeds, was the architect.

The reinforced-concrete work was designed by the Indented Bar Co., of Queen Anne's Chambers, Westminster, S.W.1, whose bars were used as reinforcement.



WOOLLEN MILL, PEEL MILLS, MORLEY, YORKS. T. A. BUTTERY, ARCHITEC

NEW GOVERNMENT ORDER AS TO HOME-GROWN TIMBER PRICES, 1917.

In pursuance of the powers conferred upon them by Regulations 2 F. and 2 J. J. of the Defence of the Realm Regulations as respects timber, the Board of Trade hereby order as follows:

1. As and from December 1, 1917, no person shall sell or offer for sale, or purchase or offer to purchase, any timber grown in the United Kingdom at prices exceeding the following:

(a) For timber standing or felled in the wood the prices set forth in Schedule A hereto annexed.

(b) For timber in the log delivered free on rail at loading station the prices set forth in Schedule B hereto annexed.

(c) For converted hardwood timber delivered free on rail at loading station the prices set forth in Schedule C hereto annexed.

(d) For converted softwood timber delivered free on rail at loading station the prices set forth in Schedule D hereto annexed.

2. The Home Grown Timber Prices (Great Britain) Order, 1917 (T. 24051) is hereby cancelled, without prejudice to any act or thing done or suffered or any penalty incurred or proceeding or prosecution taken or begun thereunder.

Signed on behalf of the Board of Trade this 4th day of December, 1917.

(Signed) H. LLEWELLYN SMITH.

Schedule A.

Schedule of maximum prices for standing timber.

Prices are per cubic foot ¼ girth Hoppus measure tape over bark, with the customary allowance for bark.

	Not exceeding per cubic ft. s. d.
Larch	1 4
Scots Pine and Douglas Fir	0 11
Spruce and other coniferous timber, except the above	0 10
Ash—	
Selected for aeroplane purposes	5 0
For other purposes	3 0
Inferior descriptions	1 6
Oak—	
Well grown, selected trees	3 3
Well grown, whole parcels	2 3
Inferior descriptions	1 3
Sycamore and Hornbeam	2 0
Chestnut—	
Spanish	1 0
Selected trees	2 0
Beech	1 6
Poplar, Alder, and Lime	1 3
Elm	1 0
Other Common Hardwoods	1 0

Coniferous timber and oak and sycamore of exceptional sizes required for special purposes may be negotiated at proportionate prices, but in such instances sellers must submit particulars to the Controller of Timber Supplies and obtain his approval thereto.

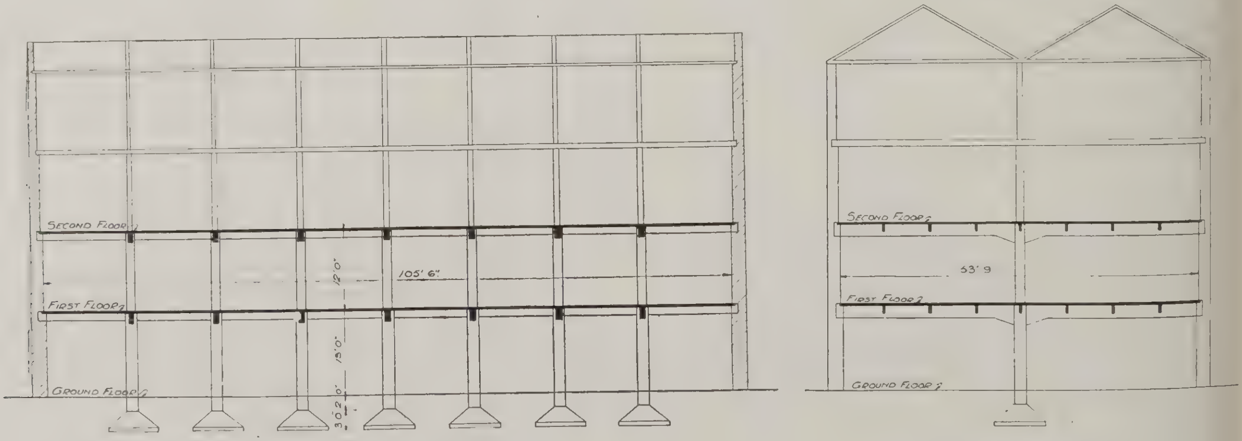
For timber felled and trimmed lying in the wood the above prices may be incr up to 10 per cent.

Schedule B.

Schedule of maximum prices for t in the log, delivered free on rail at lo station.

Prices are per cubic foot Hoppus sure tape over bark, less allowanc bark, as per scale given, and subj 2½ per cent. discount for cash pay within one month from date of dispa

	Allowance for bark. Per cent. of volume.
Larch	10
Selected lengths and diameters	10
Scots Pine and Douglas Fir	10
Selected lengths and diameters	10
Spruce and other coniferous timber (except the above)	10
Selected lengths and diameters	10
Ash—	
Aeroplane, selected butts 12 ft. and up, taken to the first stop or branch	7½
Other logs	7½
Inferior timber	7½
Oak—	
Selected butts of not less than 12 in. diameter top	10
Selected logs	10
Inferior timber	10

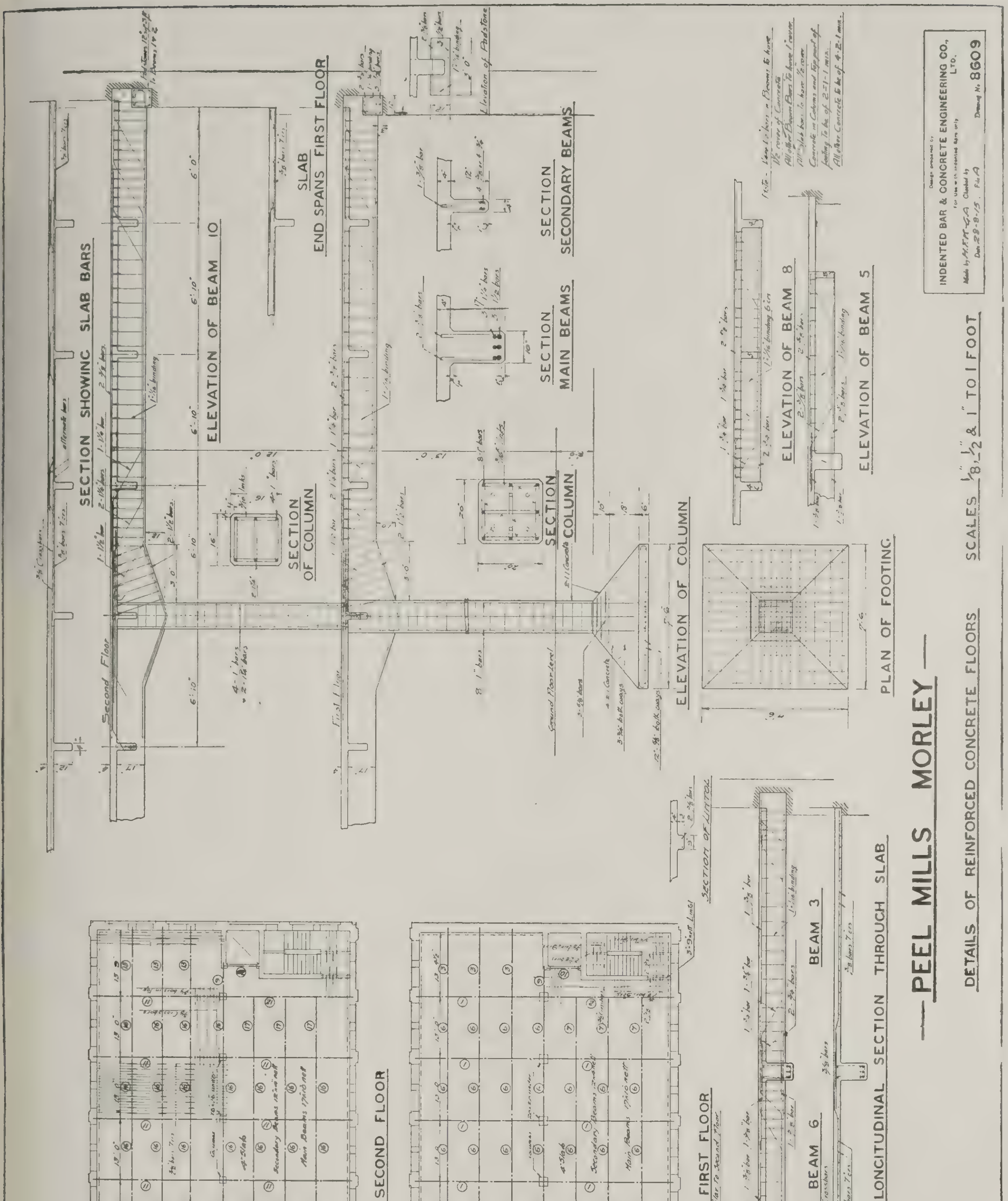


LONCITUDINAL SECTION.

CROSS SECTION.

1069

WOOLLEN MILL, PEEL MILLS, MORLEY, YORKS: SECTIONS. T. A. BUTTERY, ARCHITECT.



WOOLLEN MILL, PEEL MILLS, MORLEY, YORKS: DETAILS OF REINFORCED CONCRETE FLOORS.

T. A. BUTTERY, ARCHITECT.

	Per cent. of vol.		si d.
Sycamore and Hornbeam—			
Selected butts of not less that 12 in. diameter top	7½	...	4 0
Other logs	7½	...	3 0
Chestnut—			
Spanish selected logs	10	...	3 6
Other logs	10	...	2 6
Beech	7½	...	3 0
Poplar, Alder, and Lime	15	...	2 9
Elm	15	...	2 6
Other Common Hardwoods	10	...	2 6

Logs of exceptional dimensions required for special purposes may be negotiated at proportionate prices, but in such instances sellers must submit particulars to the Controller of Timber Supplies and obtain his approval thereto.

Where timber (other than pitwood) is sold by weight the price shall not exceed the equivalent price per cubic foot based on the above maximum prices.

Schedule C.

Schedule of maximum prices for converted hardwoods delivered free on rail at loading station.

Prices are per cubic foot and subject to 2½ per cent. discount for cash payment within one month from date of dispatch.

	Per cubic ft. s. d.
Ash—	
For aeroplane purposes, logs cut through and through	8 6
Selected lengths and thicknesses of plank	10 6
For other purposes, logs cut through and through	6 0
Selected lengths and thicknesses of plank	7 0
Oak—	
Logs cut through and through	5 0
Selected lengths and thicknesses of plank	6 0
Wagon sizes in full sets	7 6
Wagon sole bars, side rails, or headstocks in separate units	8 6
Scantlings in small sizes	5 6
Sycamore and Hornbeam—	
Logs cut through and through	4 6
Selected lengths and thicknesses of plank	5 6
Chestnut—	
Spanish logs cut through and through	3 6
Selected logs cut through and through	4 6
Selected lengths and thicknesses of plank	5 0
Beech—	
Logs cut through and through	4 0
Selected lengths and thicknesses of plank	5 0
Poplar, Alder, and Lime—	
Logs cut through and through	3 6
Selected lengths and thicknesses of plank	4 6
Elm—	
Logs cut through and through	3 6
Selected lengths and thicknesses of plank	4 0
Other Common Hardwoods—	
Logs cut through and through	3 6
Selected lengths and thicknesses of plank	4 0

Specifications which do not come within the above schedule may be negotiated at proportionate prices, but in such instances sellers must submit particulars to the Controller of Timber Supplies and obtain his approval thereto.

Timber in the round may also be sold and converted for buyers' account, the cost of sawing being charged separately at current local rates, provided that the aggregate price for log and sawing shall not exceed the prices set out in this schedule, based on the measurement of the converted timber obtained.

Town saw mills and town retailers are permitted to increase the above scheduled prices for converted hardwoods up to 20 per cent., such increased prices to cover cost of conveyance of log to town mills or town yards and delivery of converted material from mills or yards free on rail or within the usual cartage radius.

Schedule D.

Schedule of maximum prices for converted softwoods delivered free on rail at loading station.

Prices are per cubic foot and subject to 2½ per cent. discount for cash payment within one month from date of dispatch.

	Spruce, Scots Fir or other coniferous timber (except Larch). s. d.		Larch. s. d.
Deals and Battens—			
From 2 to 9 in. wide by from 2 to 4 in. in thickness, random lengths, averaging up to 11 ft., not exceeding	3 0	...	3 6
For each foot in length over 11 ft. average price may be increased according to the following scale:			
Average over 11 ft. up to and including average of 16 ft.	3 5	...	3 11
(1d. per foot cube additional for each extra foot or part of a foot in average length, i.e., 16 ft.)			
Average over 16 ft. up to and including average of 24 ft.	4 7½	...	5 1½
(1½d. per foot cube additional for each extra foot or part of a foot in average length, i.e., 24 ft.)			
Prices for specified lengths may be increased by 5 per cent. over the limits scheduled above.			
Boards, in random lengths and widths—			
½ in. thick and under	4 0	...	4 6
Over ½ in. to 1 in. thick	3 6	...	4 0
Over 1 in. to 1⅞ in. thick	3 3	...	3 9
For specified lengths and/or widths prices may be increased by 10 per cent.			
Slating Battens	3 0	...	3 6
Tile Battens	3 0	...	3 6
Crate Wood	3 0	...	3 6
Timber, in random lengths—			
Planks over 9 in. wide	3 9	...	4 3
Squares over 4 in.	3 9	...	4 3
Baulk over 4 in.	3 9	...	4 3

For special lengths the price may be increased 7½ per cent. up to and including 16 ft., and 10 per cent. over 16 ft. up to 25 ft.

Timber in the round may also be sold and converted for buyers' account, the cost of sawing being charged separately at current local rates provided that the aggregate price for log and sawing shall not exceed the prices set out in this schedule, based on the measurement of the converted timber obtained.

Coniferous timber over 25 ft. in length cut for particular purposes may be negotiated at proportionate prices, but sellers must submit details to the Controller of Timber Supplies and obtain his approval thereto.

Town saw mills and town retailers are permitted to increase the above scheduled prices for converted softwoods (excluding sleepers) up to 25 per cent., when the quantity sold is 50 cubic feet or over, or up to 50 per cent. when the quantity sold is less than 50 ft. Such increased prices to cover cost of conveyance of log to town mills or town yards and delivery of converted material from mills or yards free on rail, or within the usual cartage radius.

Sleepers. Spruce, Scotch Fir, Larch, or other coniferous timber.
(9 ft. long 10 in. by 5 in.)

	s. d.	
8-in. face	7 6	each
7-in. face	7 0	,,
5-in. face	6 3	,,

Export of Timber (Ireland) Order, 1917.

In pursuance of the powers conferred upon them by the Defence of the Realm Regulations the Board of Trade here order as follows:

1. From the date hereof until further notice no person shall, without a permit issued by or on behalf of the Controller of Timber Supplies, export or remove from Ireland to Great Britain round or sawn timber of any description grown in Ireland.

2. Application for permits under this Order must be made on the prescribed form, to be obtained from the Assistant Controller of Timber Supplies, 6, Hume Street, Dublin.

3. This Order may be cited as the Export of Timber (Ireland) Order, 1917.

Signed on behalf of the Board of Trade this 4th day of December, 1917,

(Signed) H. Llewellyn Smith.

WORKERS' WELFARE I MUNITION FACTORIES.

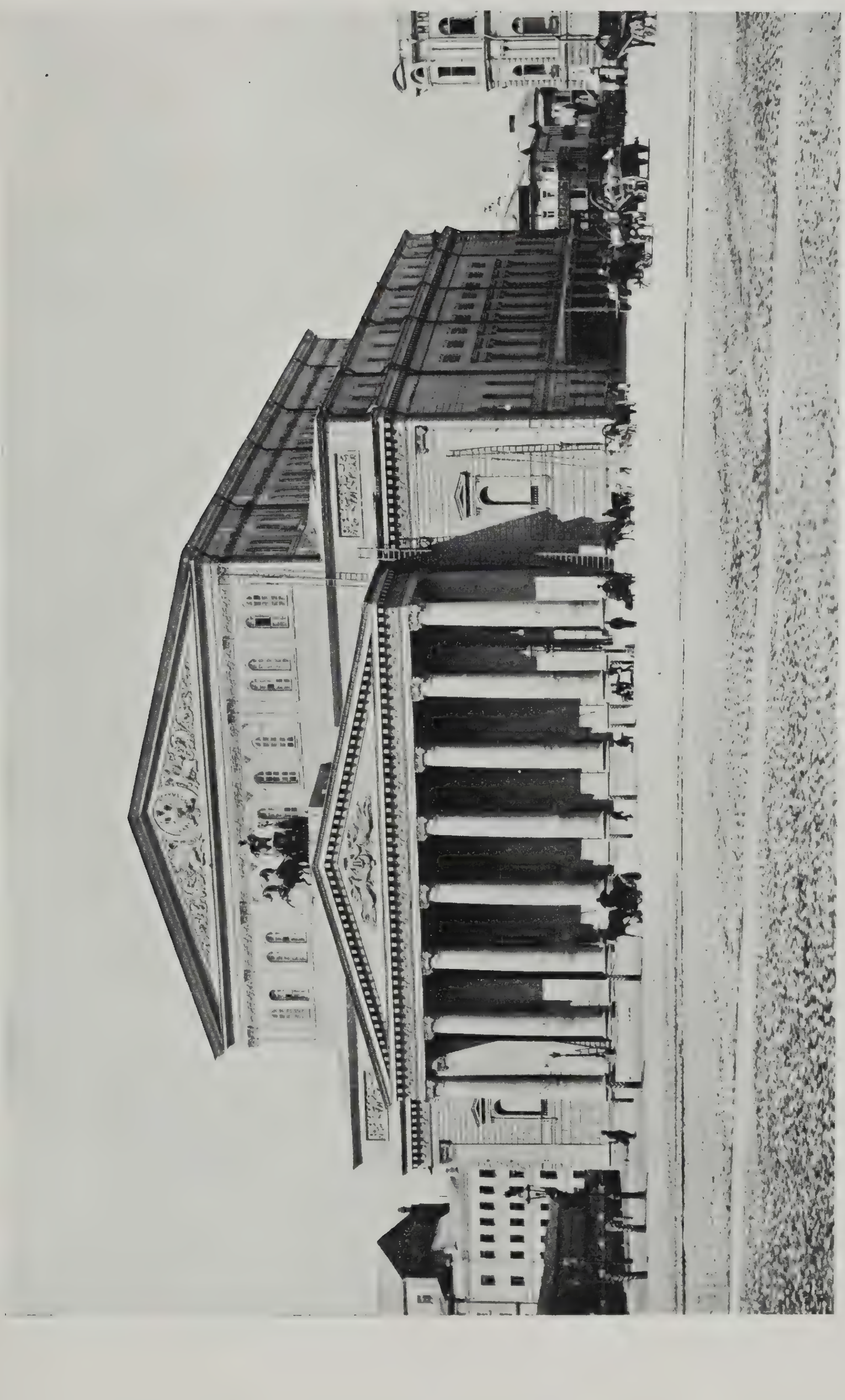
In the House of Lords on Decen Lord Sydenham asked if the C ment could state what steps ha taken to carry out the recommen of the Health of Munition Workers mittee, and how the position now st regarded (1) the limitation of the of work of men, boys, and girls; (2 day labour; and (3) labour before fast. In the present war the long of labour, which could be continued short time, might, he said, becom gerously excessive. In a report iss 1916 the Committee laid down hours as the maximum to be work it was remarkable that the Committ been forced by experience to cha views very considerably. It had proved that long hours actually r the output of the worker. Wh raised the question of Sunday labo year, he was informed that 60 per c the firms making munitions wer doing no Sunday work, and that rest were gradually coming into lin trusted that the noble lord would able to say that all the rest had con line.

Lord Elphinstone, in reply, was have the opportunity of assuring lordships that immense progress being made on the lines indicated Committee. Early in 1916 a sectio established at the Ministry of Mu known as the Welfare and Health S and through that organisation, existed in every industrial area, the tion of factory managers was con drawn to the recommendations m the Committee, who also had po incur any expenditure which mi considered necessary. In additi many other matters, they made mendations with regard to recreati development of benevolent scheme the inspection of hostels. Hours o beyond a certain point did not re any corresponding increase of outpu hours of the men were not regula the Factory Acts, or indeed by any statute. The possibility of laying some statutory limitation in the men was under consideration. garded women, boys, and girls, hours were regulated by the Factory Women and boys over sixteen co employed up to a maximum shift of hours, or sixty hours per week, bu hours were being carefully recons it being hoped to reduce the hours commencing work until after brea With regard to Sunday labour, afraid it was impossible to prohibit gether, but as regarded women, boy girls the rule was that they should employed, unless in very exception cumstances. Figures showed that was a very satisfactory diminution day work all over the country.

The Earl of Selborne thought a s twelve hours was a great strain on and boys. What periodical holiday arranged for the munition workers

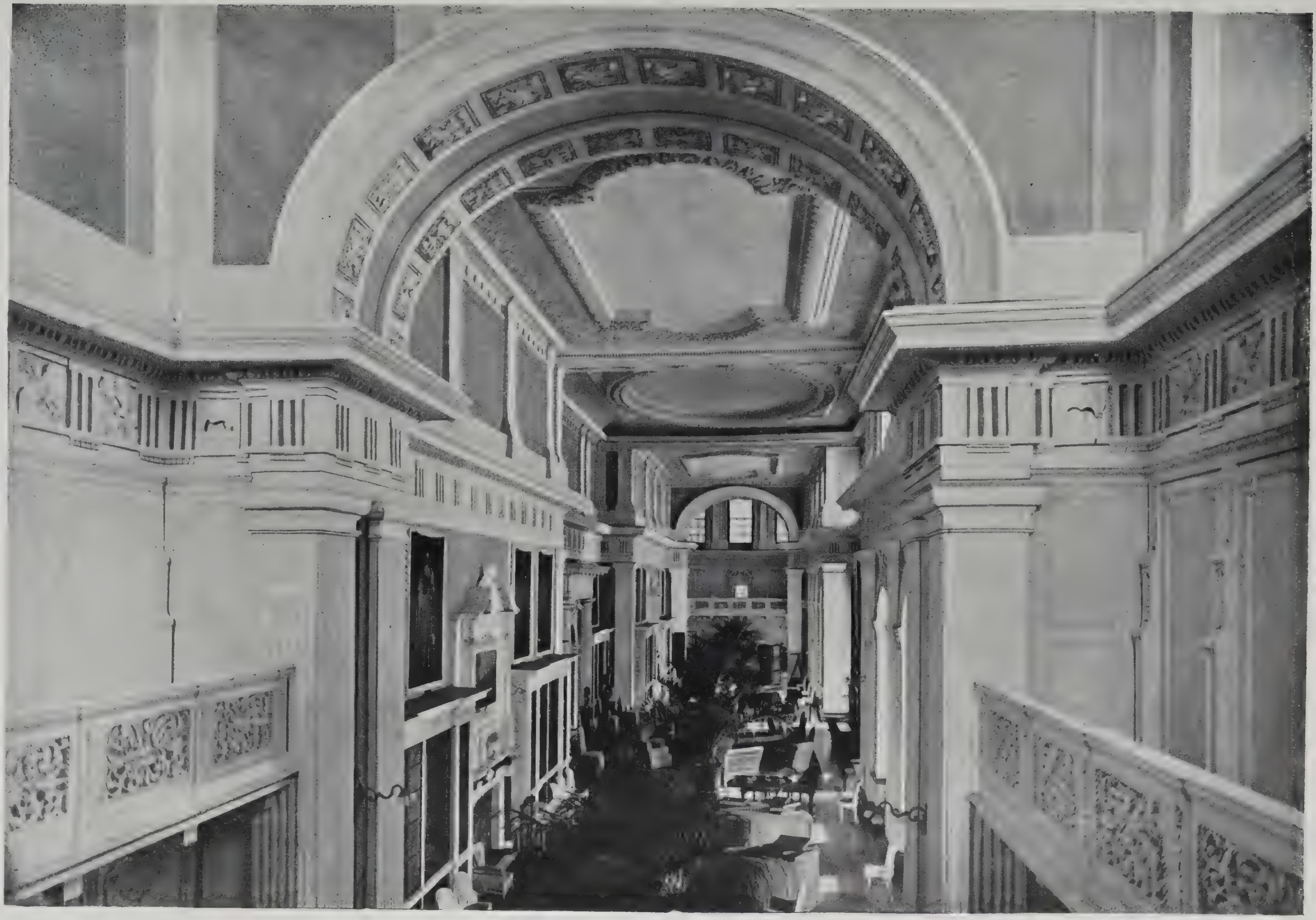
The Earl of Stair said that Briti soners of war in Germany were be ployed in making munitions, and was no provision as to giving them days. Was there any prospect of G prisoners being employed in this cou

Lord Elphinstone said he though practice was that all the local annua days should be observed by mu workers. As regarded the employm German prisoners, he was not in tion to give any information on that



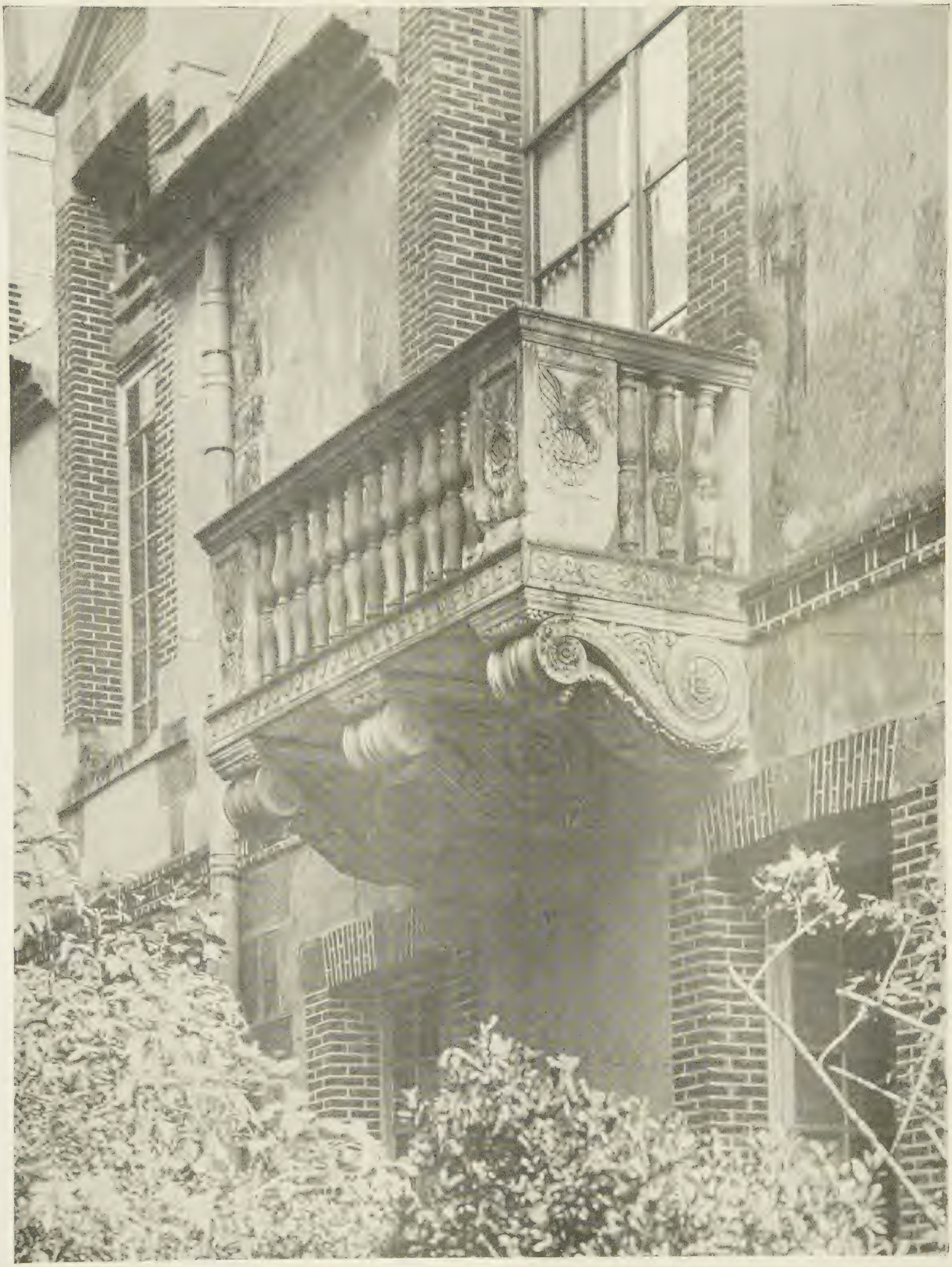
MONUMENTAL ARCHITECTURE (SERIES II.). XXXIV.—THE GRAND THEATRE, MOSCOW.

CAVOS, ARCHITECT.

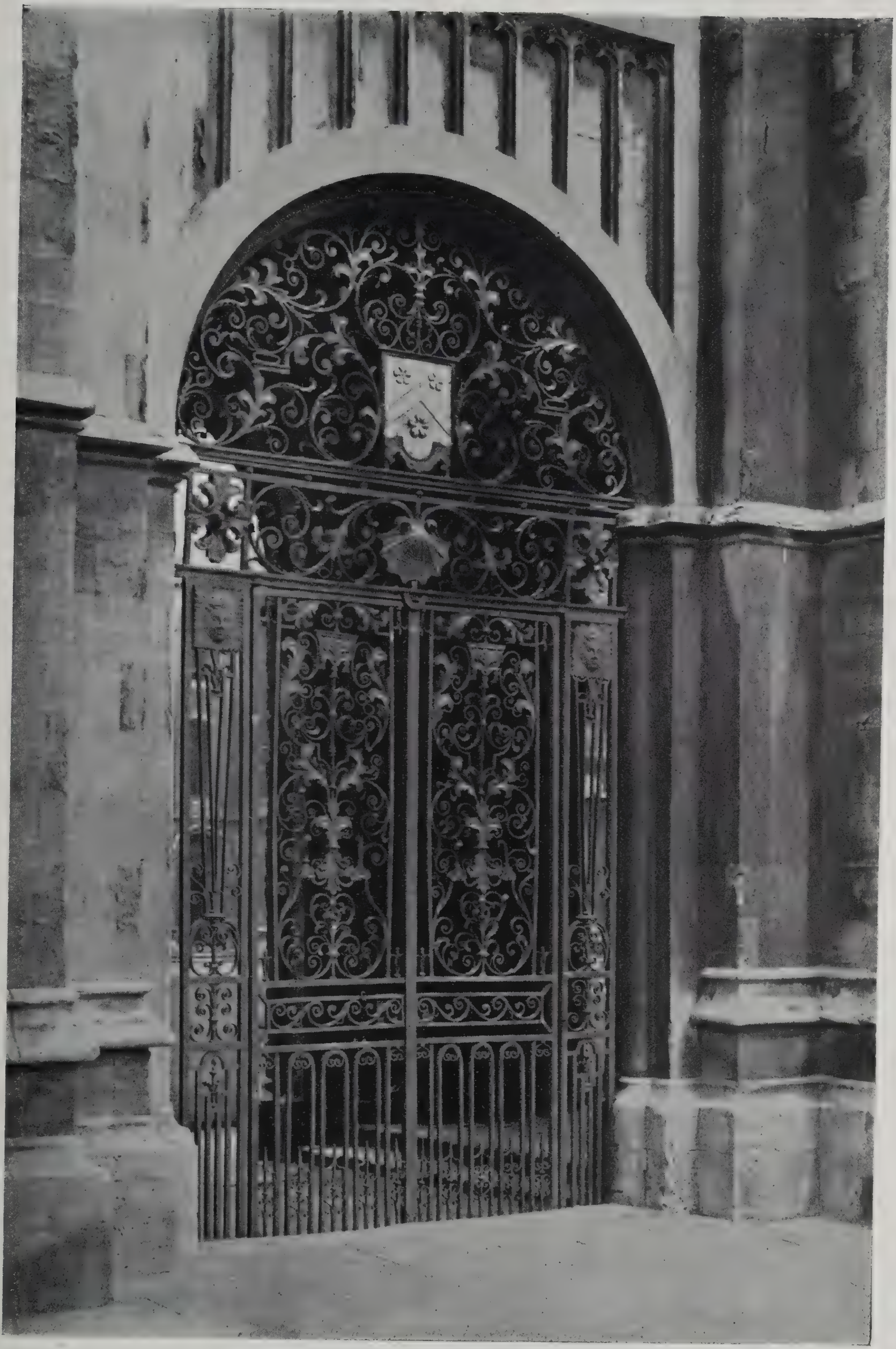


MONUMENTAL ARCHITECTURE (SERIES II.). XXXIII.—BLENHEIM PALACE, WOODSTOCK, OXFORDSHIRE: VIEW IN GREAT GALLERY.

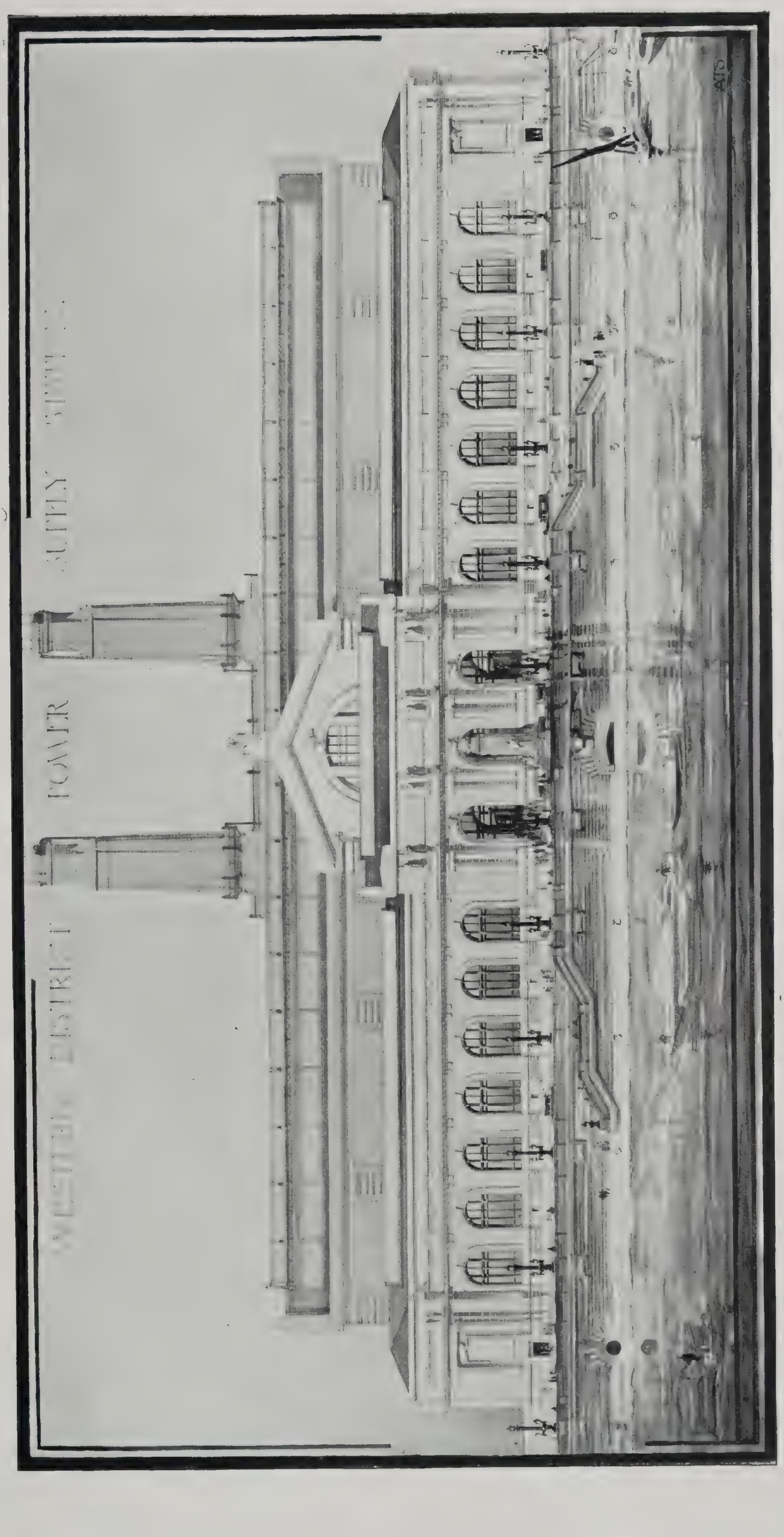
SIR JOHN VANBRUGH, ARCHITECT.



DETAILS OF CRAFTSMANSHIP (SERIES III.) II.—BALCONY ON THE PALACE OF FONTAINEBLEAU.



DETAILS OF CRAFTSMANSHIP (SERIES III.). I.—GATE TO ALL SOULS COLLEGE, OXFORD.


WESTERN DISTRICT POWER SUPPLY STN.
ATS

ARCHITECTURAL IDEAS.—XII. DESIGN FOR A POWER SUPPLY STATION.

BY ALEX. T. SCOTT.

THE ARCHITECTS' AND BUILDERS' JOURNAL.

DECEMBER 19, 1917. *TOTHILL STREET, WESTMINSTER.* VOLUME 46. No. 1198.

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a serious discrepancy between supply and
d, and cause a wastage of effort and materials
ould obviously be reduced to a minimum but
sual and erratic purchasing.*

VEEK or two ago, in dealing with Mr. Sidney
Webb's address at the reopening of the
R.I.B.A. informal conferences, we com-
d at some length on his observation that the
ment of professional institutions usually
o elderly men. We pointed out that the
men really ruled on sufferance—that the
er men suffered them gladly, being them-
exceeding wise. At the latest informal con-
e this view has been signally confirmed. Pro-
F. M. Simpson had opened a discussion on
y of the Profession," in which he advocated
sion into one body of all duly qualified archi-
with particular reference to the Society of
ects, whose members should "be taken into
stitute *en bloc*," and then uprose a champion
Associates to "warn" the Institute "that it
be a dangerous thing to throw the door open
to Licentiates." Why "dangerous"? Be-
as we had said, it is always in the power of
ssociates to turn out the government if they
o unite with that object. Rather curiously,
reat thus held out on behalf of hot-blooded
is in opposition to proposed change. "Asso-
members had passed the examinations the
te required, and would resent the bringing
ale into the Institute of persons to hold a
n similar to that which the Associates held."
aturally; but, nevertheless, the comedy of
ave elders making the pace too hot for impe-
youth is rather diverting.

* * * *

ough the "warning" necessarily partook of
nformal" character of the conference, it may
epted, no doubt, as an authentic indication
e attitude of the Associates on the Licentiate
n remains unchanged. They consented—
luctantly, it would seem—to give the innova-
trial, but are clearly opposed to further experi-
in the same direction; and, above all, they
e expected to vote solidly against outsiders
up on the lift to the landing the Associates
eached by a step-by-step ascent of the stair-
They argue, quite reasonably, that it would be unfair to obliterate their classification by admitting to it those who have not been tested by similar standards or with equal rigour. This objection is a formidable obstacle to that complete unity of the profession which therefore remains among the ideals that are perhaps all the more fascinating because they are apparently impracticable. Professor Simpson, in defending his position, asked the Associates to think more of the actual work done by a man than the passing of an examination. We all know the defects of the examination system, but the difficulty is to find a substitute that shall be equally effective, less faulty, and not less easily applied; and to judge a man by his work would, for obvious reasons, be enormously difficult.

* * * *

In a newspaper report inauspiciously headed "Unbeautiful Nottingham," Professor F. S. Granger, D.Lit., is represented as saying, in a lecture at University College in that town, that "public buildings in Nottingham are almost entirely devoid of architectural ornament," and that "instead of patronising our local school of sculpture people preferred apparently to read books about 'art as art.'" It may be suspected that the language has suffered in the summarising; but, without pinning down the professor to the words quoted, it may be permissible to infer from them the trend of his argument—that buildings in Nottingham, or in any other place, are unlovely because local art is not sufficiently encouraged. That is incontrovertible. A town that is apathetic to art is not likely either to have inherited many graciously adorned buildings or to put them up—the thing goes on in a vicious circle. There are excellent architects in Nottingham, and doubtless excellent sculptors also. and here and there one sees evidences of their work and influence; but in the long run it is the general community who decide the character of the buildings they procure and control. That, as Ruskin noted in one of his early works, is the tragedy of architecture. Ignorance and unrefinement in the patron are more directly reflected in the productions of the architect than in any other form of art. An easel picture or a piece of sculpture can, of course, be commissioned; but even then commands as to subject and composition are comparatively rare, and there is but little disposition in the client to interfere during the progress of the work. Perhaps it is for this very reason that the public take so little interest in painting and sculpture—they feel that they do not "get enough of the game."

* * * *

How very different is the case with the architect! He is subject to the client's dictation and interference all along the line. Unlike the painter and the sculptor, he has not merely to produce a marketable commodity—he is spared that risk—he must build to order; and the quality of his product depends on the extent to which he or his client succeeds in a sort of tug-of-war, in which, indeed, a weak-kneed architect may find himself dragged along on his haunches in a most undignified way. If, in disgust, he were to throw up the job, he would be promptly sued for breach of contract—a calamity almost unknown among painters and sculptors. Ultimately, therefore, the public are, as we think Professor Granger contends, the arbiters of art and the artist cannot carry them farther than they are willing to go. As to their preferring to read books about art rather than to give it definite encouragement, it is unfortunate that the bookish man seems to be of a different type from the man of action who is the chief promoter of building, and who reads nothing but the newspapers. Whether this is also the sad case of the so-called "patron" of the other arts we are not, for the moment, concerned to inquire.

* * * *

What touches us much more nearly is that the apathy of which Professor Granger complains is symptomatic of a disease that is eating deeply into the national prosperity. Our traders, unlike those of most other countries, do not seem to realise that the neglect of art is bad business. They have hardly any perception of the potency of art in practical affairs. Professor Granger seems to accuse Ruskin of having carried art high beyond the comprehension of the common man. Ruskin, it is true, sometimes made it seem a sacred mystery, with which the profane vulgar might not meddle with impunity, and perhaps that was the general impression derived from his complete works. Yet no man ever insisted more strongly on the value and the necessity of art as a ministrant to common everyday needs. Not even his disciple William Morris was more insistent on the moral obligation to make no ugly thing. But Ruskin's practicality was obscured by his transcendentalism, and those who most admire his eloquence are most prone to miss his message. Hence Professor Granger seems justified in saying that "the literary critic such as Ruskin was tempted to lay too much stress on what he supposed to be the ultimate purpose of the work of art, and by so doing gave a wrong lead to public taste." As Professor Lethaby so often finds occasion to remind architects, if we wish to have art more generally regarded as something real and vital, and no mere airy abstraction, we must discard the cant that sterilises it, and talk in plain terms of the virtues of "tidiness."

* * * *

Distrust of the arts from sheer inability to understand the tall talk about them is only one of several agencies of depression. We have not entirely outlived a sort of pseudo-religious animosity towards them. An instance of the bitterness of this particular form of hatred is chronicled in the recently issued Life of William McTaggart, which tells us that "The Free Church minister who contemptuously dismissed painting as 'a dravelin' trade' spoke to his mother of art as vanity and even wickedness." If such slanders still pass current in the remoter nooks and crannies of this untidy kingdom, the best way to turn the tables on the slanderers would be to charge them with gross unspirituality. But hatred and contempt towards the arts must be nowadays so little prevalent as to be entirely negligible. What we have to overcome is a certain stodgy-minded apathy, and this is much less easy to grapple with. Conversion from this dangerous heresy—for it has done serious harm to the nation's credit by misrepresenting us as a mean-thinking and an unenterprising people—might be effected by demonstrating incessantly that those keen commercialists the Americans have proved that good building is good business—that a liberal view of the arts is "a paying proposition."

* * * *

Professor Granger's reference to local schools was no doubt amplified in his lecture, but the meagre report upon which these notes are based raises a doubt as to the impression it will convey to the superficial reader. Certainly the professor was not advocating that narrow parochialism which seems to have reached its extreme limits in Ireland, where in one breath the people are denouncing
foreign materials and clamouring for their im
tion. Parochialism is bad only in its excesse
is good to encourage local talent, local trad
local interests generally. To do that is la
to set one's house in order, and to maintain
ciency a unit of the commonwealth; but that
is neutralised when it leads to segregation or
siveness. Professor Granger would, we are
agree in this view; for, on his own showing, it
segregation and the exclusiveness suggested
attitude of art critics that has led to the co
supposition that art is a thing apart from pr
affairs—an airy nothing for cranks to moon
a mere æsthetic craze, as more than one s
in Parliament said, or insinuated, in the cou
the debate on the Charing Cross Bridge Bill.
is the heresy which we must find some me
eradicating, or at least of neutralising; and
and sturdy insistence on the moral and m
profitableness of art seems to promise the
effectual means of converting the benighted.

* * * *

Architects will learn with great regret of the
of Mr. John P. White, of the Pyghtle Works, Be
He was one of those genial, sociable, and
knowledgable men whom it is a delight to meet
in business relations. But his chief claim to
here is the very considerable and rather special s
he rendered in augmenting architectural resourc
had the discerning eye of the connoisseur, an
recognition of the artistic merit of a centu
garden-seat which he discovered in a Norfolk vi
led to his production of other items of garden fur
that were not only beautiful in themselves, but w
harmonious sympathy with their environment
was famous, also, for the wood chimneypieces
he encouraged young art-craftsmen to carve wit
utmost skill. It was on these lines that he buil
large business that bridged over the gulf be
craftsmanship and commercialism, and his bu
success was by way of being a triumph for appli
It is also an encouraging proof that there is a
public to appreciate the artistic treatment of o
which are commonly regarded in too utilitarian a
—objects which the ordinary tradesman is accus
to make as ugly as he dares, but which Mr. J. P.
made as beautiful as he could.

OUR SPECIAL ISSUE.

NEXT week we shall publish our Annual S
Issue dated December 26. The pr
feature will be a 40-page supplement d
to the Planning and Design of Modern
Buildings, illustrated by a large number of sp
selected examples of Science, Technical, Seco
Elementary, Open-air, and other schools. At a
like the present, when educational reform is a pr
of vital national importance, this supplement, sh
a thoroughly representative collection of s
designed, planned, and constructed on the best m
principles, should be of considerable value not o
architects and educational authorities, but to al
are either directly or indirectly interested in th
ject. In addition to this supplement, the issu
contain a comprehensive survey of the architectur
building events of the year. Among the buil
illustrated are the Cunard Building, Liverpoo
new Premises for the Comptoir National d'Esc
de Paris, London, the Australian Commonw
Building, London, and the completion of the
Government Buildings, Whitehall. A further val
feature is a special section on Modern Sci
Illumination. The issue will also contain a r
architects fallen in the war, together with a list of
who have gained military and other decorations.

HERE AND THERE.

Professor William James, who contrived to be
a metaphysician without becoming a pedant,
has said, most of us indulge in the bad
of inferiority to our full self." (This has no
ice to Food Control conditions.) "Admit so
then, and admit also that the charge of being
r to their full self is far truer of some men
of others; then the practical question ensues,
at do the better men owe their escape? and, in
ctuations which all men feel in their own degree
rgising, to what are the improvements due,
hey occur? In general terms, the answer is
Either some unusual stimulus fills them with
nal excitement, or some unusual idea of
ty induces them to make an extra effort of
Excitements, ideas, and efforts, in a word, are
arry us over the dam." True, O King James!
n architectural competition is "some unusual
us," with modern emphasis on "some"; it fills
h emotional excitement; while the "idea of
ity" inducing us to make an extra effort of will
wanting. Therefore the R.I.B.A.-cum-Govern-
competition should be a huge success qualita-
as well as quantitatively. So mote it be.

* * * *

; should be an encouraging thought to those
re now wrestling with the permutations and
nations possible in the planning of four rooms
scullery. With this merely mathematical side
problem a wet towel and a "lightning eraser"
work wonders. But it takes a metaphysician
orts—to design the elevations; and it is here
Ruskin is so helpful. One-half of his book on
Poetry of Architecture," in which he says
no man can be an architect who is not a meta-
ian, is concerned with cottages, the other
ith villas. He is very severe, you will remem-
n the neglect of metaphysics by architects.
what is the consequence," he asks, of the
cts' habitual neglect of metaphysics?
have Corinthian columns placed beside
rs of no order at all, surmounted by
rosified pepper-boxes, Gothic in form and
n in detail, in a building nominally and pecu-
national; we have Swiss cottages, falsely and
niously so entitled, dropped in the brickfields
l the metropolis; and we have staring, square-
wed, flat-roofed gentlemen's seats, of the
nd-plaster, mock-magnificent, Regent's Park
otion, rising on the woody promontories of Der-
ater." Pity the sad case of the staring, flat-
gentlemen of Derwentwater! and mix not
with Grecian in your cottages or in your
, lest you make Quintilian (who is certain to
of the R.I.B.A. assessors) stare and gasp.

* * * *

kin insists, in somewhat Early Victorian
ng, that the cottage should be an embellish-
o the scenery—should give animation to the
"If we erect a dwelling which may appear
d to the wants, and sufficient for the comfort,
entle heart and lowly mind, we have instantly
d our object: we have bestowed animation,
have not disturbed repose." It is here where
mpetitors who are not metaphysicians will
down rather hopelessly. Lacking experience of
ntle heart and lowly mind, they will not easily
animation without disturbing repose. A nice
of equipoise may be gradually developed by
ing the edge of the T-square on the left leg
dividers, but by the time the right degree of
ity is attained the competition will be over;
and it will be then found that all the winners are born metaphysicians, who will have seen to it that "the light wooden porch breaks the flat of the cottage face by its projection," will have made its columns and pilasters congruous, and will not have failed to provide "a latched wicket, persuading the weary and dusty pedestrian, with expressive eloquence, to lean upon it for an instant to request a drink of water or milk." Nowadays, if the request were for milk, the gentle heart and lowly mind would register its elastic limit. At present, as the Lord Mayor of Dublin has said, it is necessary "to take the bull by the horns" in the matter of milk; "Punch," as you will have seen, courteously suggesting a change in sex and an application to "the udder end."

* * * *

A thatch firmly pegged down and mathematically levelled at the edges; stainless whitewash (make not specified); a luxuriant rose trained gracefully over the window; a gleaming lattice, diamond-paned, thrown half-open to admit the breeze that, as it passes over the flowers, becomes full of their fragrance; a branch or two of honeysuckle spread over the low hatch: there you have the Ruskin recipe for the perfect cottage, English style; "and the architecture is all we want in such a situation"—"whether looking out of the woody dingle with its eyelike window, and sending up the motion of azure smoke between the silver trunks of aged trees; or grouped among the bright cornfields of the fruitful plain; or forming grey clusters along the slope of the mountain side." Very much prettier than a "monstrosified pepper-box," but involving, it will be seen, a profound knowledge of metaphysics, or of the Early Victorian stage-carpenter cottage from which the lowly maiden steals forth amidst the gathering shades of eve to meet in yon secluded glade her shady lover, the scallywag son of the hard-hearted squire whose favourite pastime is evicting his low-born tenants. Limelight. Slow music. Scent of the rose and honeysuckle across the footlights.

* * * *

Another useful hint to competitors is "that no real beauty can be obtained without a touch of sadness. Whenever the beautiful loses its melancholy, it degenerates into prettiness." On this showing Ruskin's pet cottage is merely pretty; for his schedule omits the very important detail, "Provide, at prime cost, 1 touch of sadness of approved make, with gutter and drips to same." In Italy, Ruskin says, they get in this touch with cypress trees. In England it is imparted satisfactorily by a method commonly adopted in garden suburbs, where the rainwater-butt fulfils every reasonable requirement of sloppiness, and quite counteracts any weak tendency to prettiness. Melancholy, however, often suffuses the entire design. Then no adventitious aid is necessary. Some cottages I have seen would make heaven weep. I am not ridiculing Ruskin. Perish the thought! He was an Equator of whom one may not speak disrespectfully—he equated incompatibles to evolve paradoxes; and his diligent extraction of the cube root of poetry from architecture was a splendid corrective of the sordid industrialism that provoked it. I shall hope to see a good many of the R.I.B.A. cottage designs infused with the Ruskin spirit; but the competitors should not strive overmuch to incorporate that touch of sadness. It will come of itself on the realisation that they can't all win. How I wish they could!

DIOGENES.

HOUSING PROBLEMS AFTER THE WAR.*

BY PROFESSOR S. D. ADSHEAD, M.A., F.R.I.B.A.

(Concluded from page 257, *No.* 1197.)

THE Act of 1875, though far-reaching, was especially directed to the need for improved sanitation, and it provided the necessary legislation for effecting a great sanitary reform; and whilst it certainly secured for the industrial town-dweller a more sanitary house and a healthier town, at the same time its drastic and martial by-laws gave us those brick boxes with slate lids which, set 'twixt stereotyped streets, have so degraded the existence of the town-dweller and uglified the town.

The outcry against this mutilation of men's lives, of their imprisonment in rows of red brick cubicles, has, if anything, been louder than the earlier outcry against insanitary conditions, and here we arrive at the final phase. The segregation of industries into separate groups and the attempt to settle the operatives in detached villages, equipped with all those amenities that were once the inherited rights of every labouring man, rights which were enjoyed by the working classes, as we have shown, during the centuries that are past, rights which were enjoyed to the fullest degree in Saxon times, which were encroached upon during the Middle Ages, and which have been stolen, lost, forgotten about, are once more realised to-day.

Let us now trace the beginnings of the model industrial village as it emerged from the chaos that housing had come to when industrial towns first paused to take breath in their maddening career.

A Sheffield Scheme of the 'Fifties.

About 1850 social reformers in the neighbourhood of Sheffield set on foot a scheme whereby the artisan classes who were densely packed close to their works were enabled to become the freeholders of small houses on small plots varying in size from 300 to 1,200 yards. The scheme provided for the acquisition of land about two miles distant from the works, at a place known as Walkley, and for the setting up of building societies, of which ultimately there were more than a dozen. These societies sold plots to the workpeople on a system of payment by instalment. Ultimately there were 3,000 holders, and the scheme prospered, and became a veritable garden city. Ultimately the Sheffield Corporation, over-exorbitant in its demands for road dedication, became one of the chief culprits amongst others for stifling the continued progress of the scheme.

The Saltaire Scheme.

But about the same time a Bradford manufacturer, Sir Titus Salt, decided to erect works and housing accommodation for his operatives on model lines. The site chosen was about three miles outside Bradford, and, considering the period of its inauguration, it shows extraordinary enlightenment. It was called Saltaire. The main interest in the scheme lies in the fact that, whilst it provided in symmetrical array all sorts of public buildings and amenities, including a park of 13 acres, the houses themselves are crowded together, and work out, including roads and public buildings, as high as thirty to the acre.

The village has since been enlarged, and there are now about 830 houses, a large school of some architectural pretensions in the Italian style of architecture, built at a cost of £60,000, and comprising a large hall to seat 1,200 persons, a reading room, lecture theatre, and gymnasium.

There are also high schools, a museum, and an art gallery. Sir Titus Salt also included in his scheme a costly Congregational church.

This scheme is particularly interesting as sho the lack of interest taken by the promoter i individual amenities of each householder and i profusion of public buildings and public ame that he provided for his tenants outside the curt of their homes. It is an entire reversion of wh to be seen at Well Hall, where each householde his little garden, but where there are no p buildings, and, with the exception of one o public greens, no public amenities whatever.

Ducal Villages.

It was about this time that the ducal landow no doubt in a measure actuated by a desi emulate such industrial reformers as Sir Titus built model villages at the entrances to their est Canford village, at Wimborne, and Edensor, Chatsworth, the seat of the Duke of Devonshire examples.

As to the influence which the ducal villages exerted in bringing about the founding of the m industrial villages of which we have so m examples before us to-day, it would be impos to say to what extent any such influence is sh But there is no doubt that in the model villag Port Sunlight, Bournville, and Earswick somet of the desire to have a model village for the v people engaged on the estate already realise the ducal landowner was more than casually refl in the later efforts of the reformed industrial empl

Modern Housing Schemes.

Industrial villages like Port Sunlight, Bourn and Earswick; garden suburbs like Hampst Wavertree, and Hull; mining villages like tho Woodlands and Wrexham in South Wales; m tion housing schemes like those at Woolwich Gretna; town-planned areas like Ruislip and Quinton and Harborne area at Birmingham; m cipal undertakings like the Central Liver schemes and the garden suburbs of the Lo County Council at Tooting, Old Oak, and To ham; and, lastly, urban improvement schemes the Duchy of Cornwall estate at Kennington, ar too well known and too close upon us to justify than a comparative reference to them as types reformed industrial world which is everyw coming into its own.

It may be said of Port Sunlight that in its ea stages the village was essentially a model vil erected regardless of cost, that an outstan feature is its lack of back gardens and substitu of allotments, a system that is universal throug the village. Of Bournville it may be said that essentially a garden village, its gardens being p cularly big. Of Hampstead Tenants and W tree and other of the co-partnership ten schemes, it may be said that they have led the in providing cheap and delightful little houses the working man, where he may live an amenities and social conditions which, to say least, are calculated to his uplifting.

Of the Government scheme at Well Hall, W wich, it may be said that architecturally (provid sixteenth-century style is permissible) it is the scheme that has yet been done, but as an econ proposition and as a scheme devised to meet all social needs of a community it is thoroughly ba

And so one might point to the many deli and the many weaknesses in the housing work is being and has recently been done, but with a

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* Conclusion of the third of a series of six lectures now being delivered at University College, Gower Street, W.C.1.

ence to some very plain war cottages at Letch-
by Mr. Barry Parker, and which point the way
at is to come, I must pass on to review some of
ore characteristic of the modern industrial
es on the screen.

Garden Suburbs and Industrial Villages.

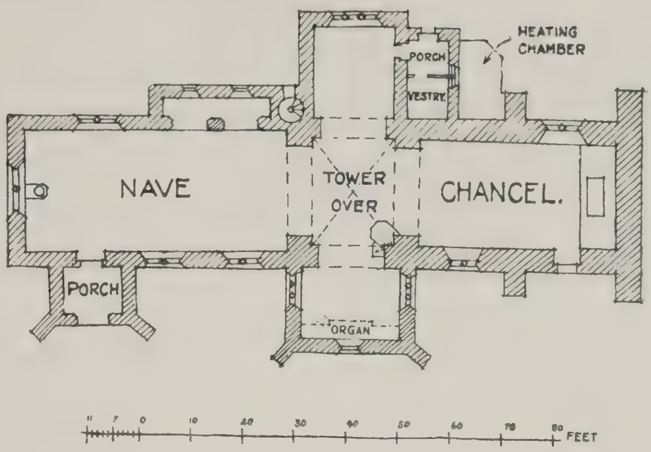
ter comparing the different schemes and review-
he progression of housing during the present
ry, I think that the conclusion we shall come to
e that up to to-day garden suburbs and indus-
villages have been a little affected, perhaps a
fussy, and perhaps lacking in composition,
g regard to their origin and comparative size.
mmencing with these picturesque cottages at
Sunlight and passing over the panorama of
ng until we arrive at the war cottages at Letch-
, and remembering that in the near future one
red model cottages will need to be erected
yesterday there was but one, we realise that
future we must of necessity see more repeti-
nd some standardisation; and with this, interest
depend more and more upon composition and
eneral lay-out of the plan.

THE PLATES.

Restoration of Whitekirk Church.

FULL description of the restoration of the
ancient parish church of Whitekirk, East
Lothian, under the skilled supervision of Sir
t Lorimer, Edinburgh, appeared in our issue
ctober 31. By the courtesy of the architect
e able to publish this week a number of illus-
s of the completed work.

the exterior changes the most noticeable is
ising of the nave roof and west gable to their
r height. The roofs have been covered with
one slates, those in use before being utilised
as possible and the lichen on them carefully
ved. The gable of the south transept has
rebuilt in complete sympathy with the rough
cter of the masonry and finished with crow-
like the mediæval porch and east gable. The
es within the building are more marked than
without. Only one real structural difficulty
nted itself. The walls of the tower are of great thickness and immense weight, and the sandstone arches which support it had been so severely burned that cracks began to develop in an alarming manner. New arches were therefore built within the old arches, and the piers were faced with new stone carefully bonded into the old piers. Near the east end of the church has been placed the holy table. The pulpit, which is of Scotch oak, richly and beautifully carved, stands against the south pillar and faces nearly west.



PLAN OF THE RESTORED WHITEKIRK CHURCH, EAST LOTHIAN.

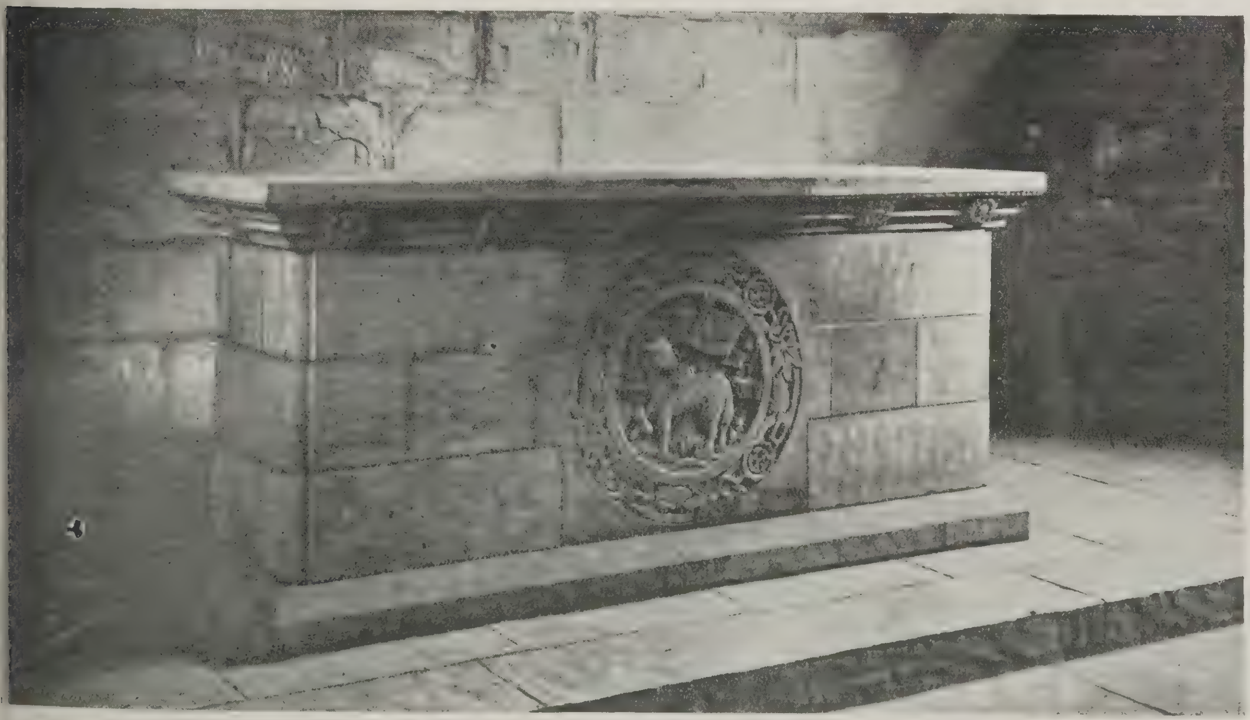
SIR ROBERT LORIMER, A.R.S.A., F.R.I.B.A., ARCHITECT.

Wrought-iron Gate from the Villa Pisani, Strà, Italy.

The Villa Pisani, or Villa Reale, at Strà, lies on the banks of the Brenta, some seven miles east of Padua. It is rather a fine mansion of the early eighteenth-century period, erected from the designs of F. M. Preti and Count Girolamo Frigimelica.

Two Dutch Doorways.

Holland derived its characteristic early eighteenth-century manner of decoration largely from France. The two doorways reproduced on the double-page plate in this issue are good typical examples.



OLY TABLE IN WHITEKIRK CHURCH, EAST LOTHIAN. SIR ROBERT LORIMER, A.R.S.A., F.R.I.B.A., ARCHITECT.

NEWS ITEMS.

Change of Address.

Mr. John Borrowman, A.R.I.B.A., announces that he has removed his offices from 9, Adam Street, Adelphi, to No. 14, Serjeant's Inn, Fleet Street, E.C.4.

Proposed New Public Baths for Dudley.

The Estates Committee of Dudley Corporation has recommended, at a meeting of the Town Council, that new public baths, which have been urgently needed for many years, be provided, and that the Committee be authorised to submit a scheme for the consideration of the Council.

Cement for Holland.

Lord Robert Cecil stated, in reply to a question by Brigadier-General Page Croft, that the gentlemen who have consented to form the committee to inquire into the question of the export of cement to Holland are: Admiral Sir Hedworth Meux, who will act as chairman; Sir Brien Cokayne, of the Bank of England; Brigadier General Cockerill, Director of Special Intelligence at the War Office; and Mr. Norton Garrard, chairman of the Baltic.

New Quays to be Built at Bristol.

The Bristol City gave their approval last week to a scheme for the enlargement of the accommodation of the Royal Edward Docks at Avonmouth at a cost of £1,325,000, to be effected by the construction of an eastern arm with 4,870 feet of quay. A new western arm not included in this amount has already been sanctioned. The extension is due to the growth of business in the port, and in particular to the establishment of a spelter-producing industry for dealing with Australian ores. The works to be erected will, it is stated, be among the largest of the kind in the world.

Munificent Bequests to Rochester.

Mr. Thomas Hellyard Foord, who in his lifetime had made princely gifts to Rochester Hospital and to the cathedral, of which he restored the tower and spire, has by will bequeathed another £10,000 to the hospital and £2,000 to the Dean and Chapter for the restoration of the south choir aisle of the cathedral. Both the cathedral and the hospital were the object of the liberality and care of the first Norman prelate, Gundulf of Bec, who founded the hospital as a leper hospital, and built a larger cathedral than that which sufficed his Saxon predecessors. The Norman chapel of the hospital is still in use.

Proposed Garden City for Portsmouth.

A garden city on the southern slopes of Portsdown Hill is the latest scheme for the development and improvement of Portsmouth after the war. It was brought forward recently by a member of the Town Council, whose suggestion is that as nearly all the land available for building within the borough boundaries has been taken up and used, the Corporation should acquire some thousands of acres on the slope of the hill (to the north of the borough) and lay it out, the houses being chiefly artisans' dwellings. As this site is several miles out of the borough an extended tramway service for conveying workmen to and from the Dockyard and elsewhere would be necessary. A great objection to the scheme is the long distance of the proposed site from the Dockyard and other work places. Then the only approach to it is through the village of Cosham, where the road is very narrow. The question was fully discussed a few days ago at a largely attended meeting of the Portsmouth Chamber of Commerce, and although several leading tradesmen and professional men expressed themselves as being strongly in favour of the scheme, the discussion was adjourned.

Organ-builders as Air Workers.

Organ-builders have, it is stated, proved to be among the best aeroplane makers, but the Federation of Master Organ-builders, in a letter to "The Daily Mail," points out that the whole of the craft might have been secured for the work if the Government had accepted their offer, made nearly three years ago, of factories, plant, and staffs for the duration of the war for the manufacture of war material, including aeroplane parts. With the gradual stoppage of work, organ-builders, says the Federation, have had to close down. Not only, therefore, has the opportunity been lost for making the best use of our skilled men but also the task of restoring to its former pre-eminent position an industry now plunged in ruin has been rendered exceedingly difficult.

Ancient Stone Monuments.

"Rude Stone Monuments and their Builders" was the subject of a lecture by Sir Courtenay Bennett, C.I.E., at the Plymouth Institution. The lecturer said that these monuments appeared to have been constructed about 4,000 years ago, probably by one race, who found their way all over the coasts of the world. They were probably people of Mongolian extraction, and took their course along the coast through Egypt and along the Mediterranean, finally reaching Britain and North-Western Europe. How or whether they reached America would very likely never be known, although monuments of their type had been found in that continent. The strongest proof that the same Asiatic race found their way alike to Europe and America lay in the similarity of their rude stone monuments. Dolmens were used by the American-Indians as burial places in the beginning of the nineteenth century, and their connection with the proto-Egyptians could be traced in an almost unbroken chain. The early Britons of the neolithic period exhibited the same characteristics and built the same kind of monuments, such as the dolmens of Dartmoor. Wherever these monuments were found, concluded the lecturer, his thesis was that they were the work of one race, and he suggested that this missing race were Finns.

SOCIETIES AND INSTITUTIONS.

Birmingham Builders' Association.

The annual meeting of the Birmingham Building Trade Employers' Association was held at the Chamber of Commerce last week, Mr. A. J. Bowen presiding. The report, which was of a satisfactory character, was approved. Mr. Bowen was re-elected president, Messrs. E. Teall and S. G. Capcote vice-presidents, and Mr. H. Gibbs hon. treasurer. With reference to the latest award by the arbitrator, it was decided to recommend that the increase should apply to private work generally throughout the trade. The award is that the rate of wages is to be advanced from December 1, 1¼d. per hour as a war bonus to persons when engaged on munition work, and is to be regarded as a war advance intended to assist in meeting the increased cost of living. This a affects 6,000 men, and is in addition t 2½d. previously paid. It is unders that the employers will make the a apply to all operatives engaged on than war work, as was done when th advance was made. Sir William Robi has also awarded an advance of 1¼d hour, as a war bonus, to the membe the Birmingham district of the Oper House and Ship Painters and Decora whose wages are now brought u 1s. 1¼d. an hour.

Wakefield and District Master Buil Association.

The annual meeting of the Associ was held at the Bull Hotel last week, Saml. Hall (President) in the chair. the proposition of Mr. Crook, seconde Mr. Craggs, the officers of the Associ were re-elected *en bloc* for the ens year. The accounts were submitted adopted, and the auditors (Messr Turner and H. B. Steel) were thank their services. Reports were present recent meetings between representati the Association and the Brickla Joiners', and Labourers' Societies, at w meetings it had been arranged that th wage of the members of each of societies should be increased one penn hour, and the agreements which had come to at these meetings were confir

TOWN PLANNING AND HOUS IN SCOTLAND.

The quarterly meeting of the Sc National Housing and Town Plan Committee was held on December 7 i Council Chambers, Edinburgh, Thomas Hunter, Town Clerk, presi The Chairman said they met in some changed circumstances. Hitherto had sheltered themselves behind expected report by the Housing mission. They had got that report, they were deeply grateful to the prod of it, who had rendered such yeoman vice. They were free now to act, would be a reflection on their own in gence if they acted wrongly and i ciently. He looked forward with ho their action within the next few m along with their colleagues in Engl One thing they must not forget was this housing matter was appalling i magnitude, urgency, and importance, it no longer admitted of being del He hoped they would be able to la foundation that day, and that re would be produced between now and next meeting.

Bailie Paton, Dundee, submitted th port of the Parliamentary Committee. said the Committee had met to con what steps should be taken followin the report of the Royal Commission was suggested that a committee repr tative of all the interests should be pointed with the view of considering drawing up a definite reasoned repor be submitted to a National Conferen be called on the subject. He also gested that there should be a small ex tive committee appointed to act in way necessary. Some discussion place as to the functions of the comm at present, but ultimately it was ag to approve of the proposal, the n being left over for appointment.

Sir Thomas Hunter was elected ch man for the year, and Sir John Lin vice-chairman.

WAR·BVILDINGS·SECTION

HOUSING AND TOWN PLANNING AT THE CLOSE OF THE WAR.

ur issue for December 5 we gave ne interesting extracts from the 1 report prepared bv the Technical ence set up by the National ng and Town Planning Council to er various problems which are to present themselves for solution ard to housing and town planning at the close of the war. Following rther instalment of the report:

Planning of Housing Estates.

members of the Conference desire nit the following resolution: "This ence is of opinion that the Govern- should be advised to lend or grant in connection with 'Housing es after the War' only when the it' of the estate or area on which using scheme is to be carried out with the approval of the Local ment Board, has been prepared on lanning lines, and is in conformity general outline town plan for that of the district of which the hous- eme forms a part."

e opinion of the members of the ence, the Government will commit der of an inexcusable kind if, for ason—other than that of housing orest at the centre of cities (as in e of the schemes of the Liverpool ation) they permit housing schemes carried into effect under the old ons of lay-out.

he passing of the town-planning of the Housing and Town ng Act of 1909 the national policy respect was made clear, and it is ood planning is in the public .

e is, moreover, a strong feeling that early date town-planning action by uthorities should cease to be per- and become obligatory, and mem- the Conference are of opinion that vernment should show no hesitancy sist that post-war housing schemes shall bear witness to skill and foresight in planning and shall embody good standards, more especially in regard to: (a) The limitation of the number of houses per acre; (b) the provision of open spaces; (c) the securing of arterial roads of adequate width; (d) the relaxation of conditions in regard to width of roads in residential streets; (e) the fixing of building lines, etc.

With regard to these points, the members of the Conference are of opinion: (a) That the number of houses per gross acre in urban housing schemes should not exceed twelve. They also strongly recommend that whenever housing schemes require the acquisition of several acres of land, a substantial proportion of the area —10 per cent. is suggested—should be devoted to recreation grounds, playgrounds for children, and open spaces. In the provision of these open spaces it is desirable, wherever possible, that no house should be more than 300 yards from a children's playground, which should be accessible without crossing a main road, and wherever possible recreation grounds should be adjacent to public school playgrounds, so that the shelters, etc., may be available for them both.

With regard to (b) That attention should be given to the planning of arterial roads so that future expenditure on road-widening may be avoided; and

(c) That on condition that the preparation of a town planning scheme is entered upon within a reasonable period, local authorities should be permitted to relax for the purposes of these housing schemes, their bye-laws and customary provisions relative to the width and construction of streets in residential areas.

The members of the Conference regard this economy as of great importance. Provided that ample space is given between houses on opposite sides of residential streets, so planned as to be, in effect, non-traffic streets, it is in the interest of the public to diminish the width of road to be made (and maintained) and to devote the space to the "green of useful garden instead of the grey of useless road surface," to quote the dictum of the Right Hon. J. H. Whitley, M.P., the Deputy-Speaker of the House of Commons. It will be advisable, in the opinion of the members of the Conference, to give local authorities power, under well-defined conditions, to declare such residential streets open only to limited traffic and to forbid the access of exceptionally heavy traffic—such as industrial motor lorries of great weight.

(e) That building lines should be fixed to secure the proper set-back of cottages.

The Value of Gardens for Food Cultivation.

In suggesting under (a) above that not more than twelve houses per gross acre shall be permitted in urban areas the members of the Conference desire to emphasise the national aspect of this question.

There will probably be a world shortage in regard to food supplies in the period following the war, and, both on the grounds of individual economy and national well-being, adequate garden space should be the rule and not, as to-day, the exception.

Rural Planning.

Under the head of Rural Planning, the members of the Conference desire to urge the Government to make a condition of housing loans and grants-in-aid for rural housing schemes: (1) That there shall be in every case a proper lay-out scheme submitted; (2) that where a scheme is large enough to justify it, an open space shall be provided; (3) that the provision of land for cottages shall, as a rule, be not less than one-eighth of an acre per cottage; (4) that even where only a few cottages are built, care shall be taken in their grouping (and especially in the set-back from the main roads, which should be ample, in view of possible future requirements), Regarding the acquisition of land by local authorities for housing schemes, both urban and rural, the following resolution has been unanimously adopted:

"That the members of this Conference are of opinion that sanction should be given by the Local Government Board, and loans should be granted without delay by the Treasury for the purchase of suitable housing sites."

It is felt that unless action along the lines suggested is taken much regrettable delay will be caused, and that, therefore, it will be impossible to have schemes fully ready to be placed in operation directly the war closes.

The Shortage of Materials: Substitution of Materials, etc.

With regard to point (2) in the terms of reference, viz., the provision of workable solutions of technical difficulties arising in regard to (a) the shortage of materials (and more especially timber), where such shortage is due to the abnormal demand which will arise at the close of the war; (b) the economical adoption and use in building construction of new materials or new forms of materials; (c) the substitution of materials in construction, e.g., the substitution of concrete, for timber, in floor joists, etc., the members of the Conference have given careful consideration to questions relative to the supply of the following materials: Bricks, stone, timber, glass, cement, lime, ironmongery and light castings (baths, stoves, grates), roof coverings, etc.

In making the following recommendations the members of the Conference recognise that the most economical method of employing the labour of men available at the close of the war will be to follow methods of construction with which workmen were familiar before the war. At the same time they advocate that all new methods of sound hygienic construction should receive careful and favourable consideration.

Bricks and Stone.

Given proper organisation, the supply of enormous quantities of bricks and stone for the construction of the 300,000 houses does not present any insuperable difficulty.

Such questions as the supply of fuel for brickmaking, the rapid and prior demobilisation of brickmakers and quarrymen, and the organisation of additional transit facilities in the shape of motor lorries (which towards the close of the war will be released from military work, etc.) must, however, be given careful attention, and be made the subject of wise foresight in planning adequate "ways and means" of overcoming difficulties.

The members of the Conference will in a later stage deal in detail with several points arising in this relation, but meanwhile they desire to plead urgency for the consideration of the present conditions of the brickmaking industry on the ground that if the present condition of affairs is left unremedied the efforts of the Government to secure an adequate supply of bricks will be hampered and thwarted.

At the present time the manufacturing plant of scores of brickyards is rapidly being destroyed by the elements, and as a result of the absence of orders the owners of these brickyards are likely to go into liquidation.

To permit the decay and destruction of the plant of the business organisation on which the production of bricks at the close of the war must depend, will be unwise in the extreme, and the members of the Conference beg to submit the following resolution:—

"That the attention of the Government be drawn to the serious condition of the brickmaking industry throughout the country and recommend an investigation to ascertain what steps (if any) can be taken to keep this industry alive so that the brickyards may be kept in efficient working order and sufficient stocks of bricks available at the close of the war."

Timber.

In discussing the shortage of timber supplies at the close of the war the members of the Conference have realised from the outset that the problem is one in regard to which they have not (and cannot hope to have) the knowledge necessary to enable them to arrive at a sound judgment as to the possibility of importing timber from the Baltic, Sweden, Norway, Canada, and America at the close of the war.

But they nevertheless realise that the two following points may be stated quite clearly:—

(1) The demand for seasoned timber from European sources of supply will be very great at the close of the war.

(2) The supply of shipping available for the transhipment of all the timber which can be secured for England, Scotland, and Wales will be below the normal.

The members of the Conference regard it as clear, therefore, that measures of the most vigorous kind should be taken to secure a great increase in the cutting and seasoning of timber in various areas of probable supply.

In view of the great demand which will certainly be made for the timber of Sweden and Norway, and the prospect that (if we are helplessly dependent on these markets) the price will be a greatly inflated one, the members of the Conference desire to suggest that special action should be taken to secure the cutting without delay and the seasoning of timber in Newfoundland, Canada, other parts of the Empire, and the United States.

With regard to the timber of the United States, the shipping engaged in the return of the war material of the American Army might well carry a great deal of timber on the journey to Europe. In view, however, of the fact that the scantlings of the American timbers are unfamiliar to those engaged in constructional work here, authoritative action should be taken to demonstrate to users of timber that constructional timbers of such sections as are in common use in the United States may be adopted with safety for similar work in Great Britain.

With regard to home timber, according to the "Statesman's Year Book of 1914," there were in England 1,666,000 acres, Wales 182,000 acres, and Scotland 878,000 acres in woods and plantations. In this relation the members of the Conference desire to point out that prior to the latter half of the nineteenth century the timber used in rural areas, and in most urban areas, was home-grown timber. It is not, therefore, in accordance with the facts to say that British-grown timber is of no service.

It will probably not be necessary to rely to a great extent on home-grown timber, but the members of the Conference desire to urge the Government to take steps to secure that an endeavour shall be made to furnish at least home-grown timber for the 100,000 rural cottages.

To bring timber hundreds of miles across the sea and then to send it many
miles on overworked railway lines to
districts in the centre of England,
in the woodlands of the rural countie
ber can be found in relative abun
will be to enter upon a wasteful an
economic course of action.

From one point of view this quest
urgent. Artificial methods for seas
timber are costly, and if home-grow
ber is to be used to a great extent i
building of cottages at the close o
war, the trees should be felled befo
sap rises in the spring of 1918. I
probably not be possible to do more
this until the end of the war is clea
sight, but then without delay steps s
be taken to pass quickly through the
stages of seasoning.

The members of the Conference
also to urge the Government to tak
earliest possible steps to secure that a
when the military occupation of
various hutments erected during the
ceases, the timber shall, as far as pos
be made available for use in the con
tion of houses. The members of the
ference realise that much of this t
is not suitable, but, in so far as they
been able to make inquiries, they
been led to realise that, given care
skill in dismantling and adaptation
use of this timber will be of materi
vantage in the earlier parts of the pos
period.

Ironmongery and Light Casting

The members of the Conference w
a later date submit several detailed
gestions as to the production of the s
of well-designed standardised fit
They take the view that, given the
cation of the best skill in designing,
of the trumpery fittings which have
commonly in use in the past may
placed by fittings which will be mor
viceable and more artistic.

The factories and works which
before the war engaged in the produ
of these requisites for cottage buildin
now for the greater part engaged i
production of munitions, and are cont
to a greater or lesser degree. For
reason it will be practicable for the Go
ment gradually to turn the energie
these factories and works, towards th
of the war, into the channel of prod
on a large scale whatever is require
at a price which shall not only be f
the producers, but fair also to the
payers.

Roof Coverings.

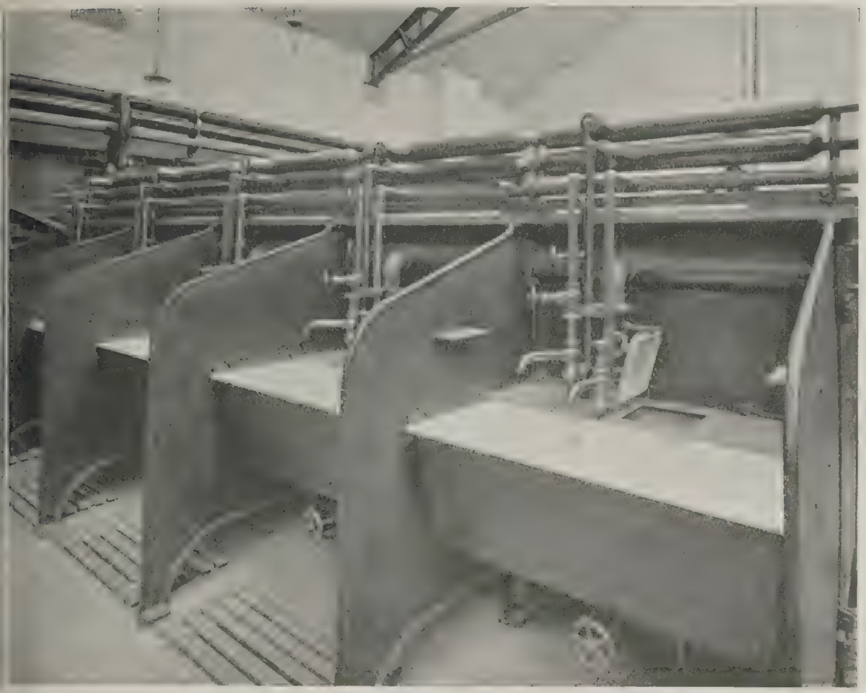
The members of the Conference a
opinion that, with a view to increasin
range of materials available for roof
ing, materials of the composition type
be adopted provided that they are i
meable, durable, and fire-resisting.

With regard to (b) The econo
adoption and use in building constru
of new materials or new forms of
rials; and

(c) The substitution of material
construction, e.g., the substitution of
crete, for timber, in floor joists, etc.,

A Sub-Committee of the Conferen
now considering these points. They
already reported that concrete blocks
slabs for walls and partitions can be
to economical advantage where su
aggregates are available in sufficient
tities. Tile blocks will also come w
the scope of the same recommend
when used in combination with brick-
or concrete-built cottages, for such
tions as internal walls or partitions.

(*To be concluded.*)



MMUNAL WASH-HOUSE AT HAMMERSMITH, LONDON: VIEW OF WASH-STALL. SHOWING BOILER, TAP, AND FITTINGS.

COMMUNAL WASH-HOUSE.

or to the war numerous inquiries received in this country with d to equipments for communal wash- s. The idea is certain to be revived diately after the war, so a few par- rs of what is being done in England on a smaller scale, in Scotland) may interest to readers of this Journal.

e accompanying photographs show communal wash-house at Hammer- , probably the largest in Great in. The equipment comprises vari- anges of wash stalls, each stall con- g of cast-iron side frames, boiling steam connection, and a wash tub steam connection, all the necessary s for hot and cold water supply at the operator's hand. After the ng has been treated in the stall the are put into the hydro-extractors, or , one of which is shown in position e end of each range. This machine articles very quickly by centrifugal . The operation being very simple, tendance is necessary, and provided p of the revolving basket is well led there is no danger, as the drive derneath the floor—a position that sually be arranged.

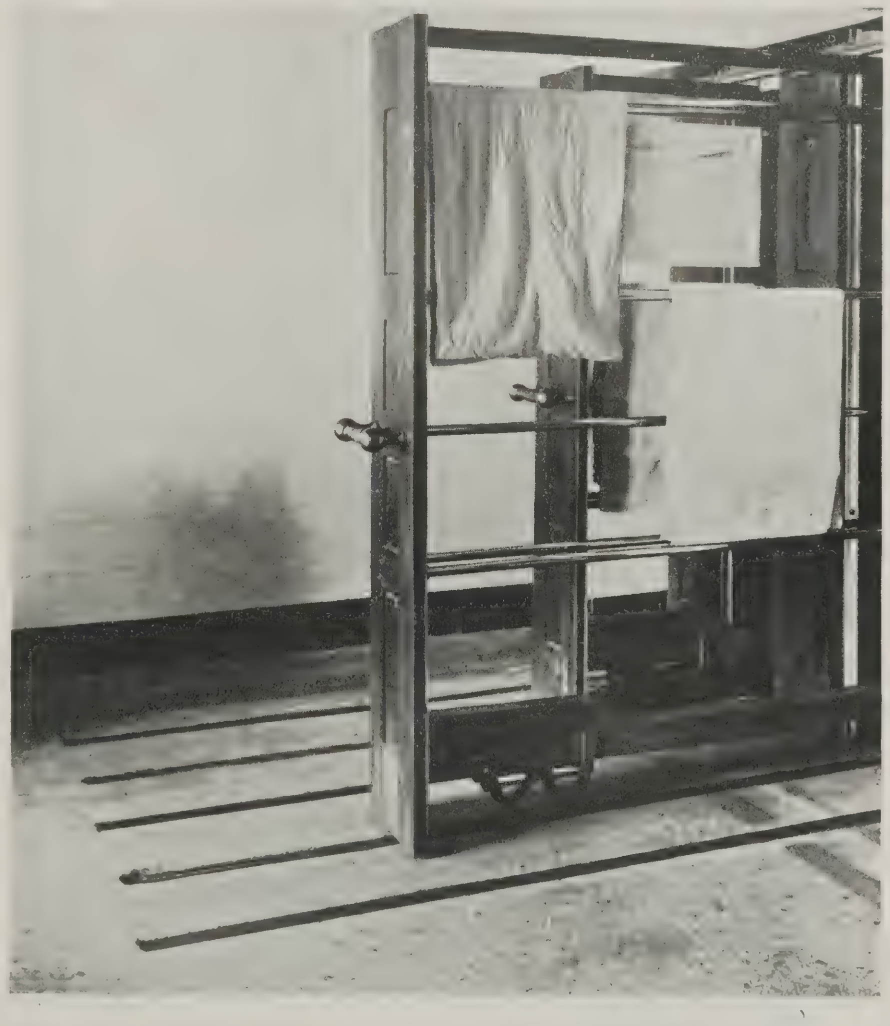
e next process to which the washing mitted is drying under steam; this ried out on a range of drying-horses, own in the illustration opposite. horse or drier consists of a number ular hanging rails fixed to wrought- lates, to which the carriages are also The lintels are of cast-iron, and prights are of steel, securely stayed ngle and tee irons. The back and plates are also of metal, the latter covered with wood for strength and The hot-air for heating these s is generated in a tubular air heater, ting of two steam heads or ends, steam tubes supported between, the being enclosed by a cylindrical steel casing, with air inlet and outlet s.

steam employed—either live or exhaust—is passed through the tubes, so that the end covers and tubes only are subject to pressure. The air is drawn across the outside of the hot tubes, and is guided by baffle plates to take a zig-zag course to insure uniform heating. The end covers are of cast-iron dished section, ribbed on inside and bolted to mild steel tube plates. The tubes are expanded into plates, and are 1½ in. external diameter of solid drawn mild steel, easy of access for renewal. The steam pressure for which the heater is designed is 45 lb. per sq. inch for Nos. 0 and 1 sizes, and 30 lb. per sq. in. for larger sizes. From the heater the hot air is discharged into the chambers by means of a centrifugal exhaust fan running at a moderate speed, with sheet-steel balanced wheel running in oil-ring bearings. The casing is constructed of sheet and angle steel, and the frame is of cast-iron, with run metal split bearings bolted to casing.

Communal wash-houses on the above lines are established in most of the large cities in England, particularly in the City of London (where there are at least half a dozen) and at Newcastle-on-Tyne.

Merely a nominal charge was imposed on householders who carried their washing to these establishments, and soap and soda and washing materials were provided free.

The idea had certainly made much headway in this country prior to the war: and it is intended to establish communal wash-houses on a similar scale in some of the industrial towns in Lanarkshire and elsewhere. Obviously it embodies an idea of which the application could be very beneficially extended to many other forms of communal service or supply—cooking centres, for example.



COMMUNAL WASH-HOUSE AT HAMMERSMITH, LONDON: VIEW SHOWING DRYING-HORSE PULLED OUT.

BUILDING OPPORTUNITIES IN ARGENTINA.

Although building has practically come to an end in the larger cities of the Argentine since the commencement of the war, the continuance of which has rendered it impossible to obtain supplies of construction material, there is no question (says the "British and Latin American Trade Gazette") that immediately normal conditions are restored there will be a large accession of new buildings, and the restoration of existing structures. The Argentines resident in large cities have a perfect mania for building. This is strangely in contrast with the proclivities of the camp-dwellers, who seem willing to put up with almost any kind of dwelling so long as it keeps out the wind and weather.

To afford some idea of the opportunities in Buenos Aires alone open to manufacturers of builders' machinery and appliances, it may be mentioned that there are more than 300 different streets in the city, and these, if extended in a straight line, would measure in length over 600 miles. New thoroughfares are being surveyed, and in some cases laid out, and only await the return of peace to the world to witness the erection of more avenues of those stately buildings for which Buenos Aires is famous among South American countries. The most notable street in the city, in everyone's opinion, is the beautiful Avenida de Mayo. This splendid boulevard is over one mile in length, and about 120 ft. in width; it extends from the Plata de Mayo to the Capitól, or Palacio de Congréso. Down the middle of the thoroughfare, in a double row, are suspended upon artistic iron poles the arc-lights which illumine the city most brilliantly. On each side, near the kerb of the 20-ft. sidewalk, are planted rows of trees extending the entire length. The main feature of this Avenida—its only competitor is the magnificent thoroughfare in Rio de Janeiro known as the Avenida Central—is the uniformity in height and fine architecture of the buildings which line it. There are no "skyscrapers" as in New York No buildings are more than six or eight storeys high, and all are of fine and modern style with artistic frontages.

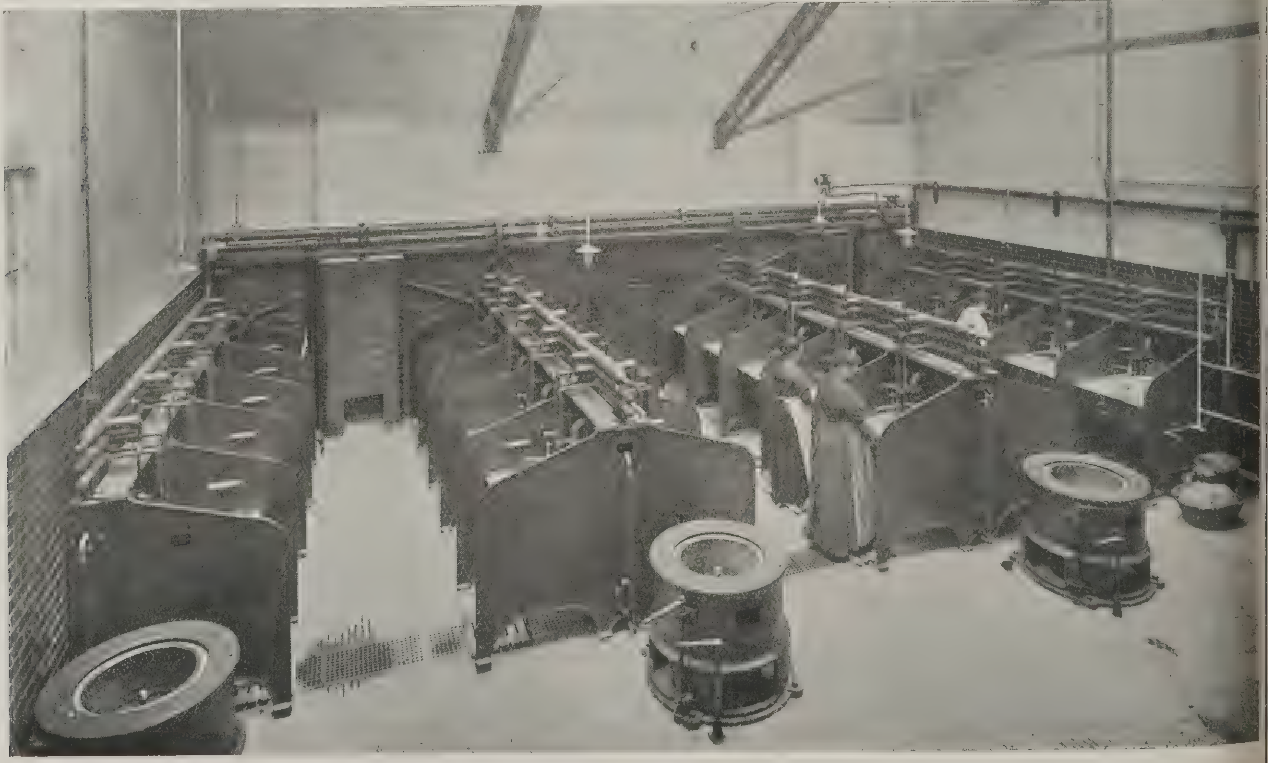
The rapidity with which buildings are run up and completed in the South American cities—this does not mean that they are in any way "jerry-built"—necessitates the employment of all the builders' latest appliances and machinery. More especially, the use of concrete has obliged our contractors to adopt power-driven mechanical mixers, as well as mechanical navvies of all kinds in the excavations that are being carried out, even at this time, in the central localities of the larger cities, in order that full advantage may be taken of the area of ground (the cost of which is extremely high), and in order to facilitate the speedy removal of the excavated earth and the loading of it into the carts that bear it away from the site. Thus there is a demand for mechanical concrete mixers. Many of the Buenos Aires street-paving companies, having seen the satisfactory results of employing mechanical concrete-mixers in the large contracts given out by the Anglo-Argentine Tramways Company, and the Buenos Aires Western Railway Company (both being in connection with long, deep tunnels made under the city roads), have adopted this kind of machine for the mixing of asphalt. The municipality of Buenos Aires has already two asphalt factories, and is now in the market for machines of this description.

British manufacturers seeking to introduce into the Argentine new machinery of almost any kind must be prepared for many rebuffs, for with all their enterprise and energy Argentine builders are not lovers of experiments. They would rather see a new machine tried at someone else's expense, and they will often go against their own judgment rather than incur the outlay of some thousands of pésos upon a new apparatus, the capabilities of which have not been sufficiently estal
Very many of the large contract
Italians, and it is known that the
highly conservative people, chary
extreme of trying new inventions.
convince them, however, tha
can really save money or time-
means money to them—and they ca
be booked as purchasers.

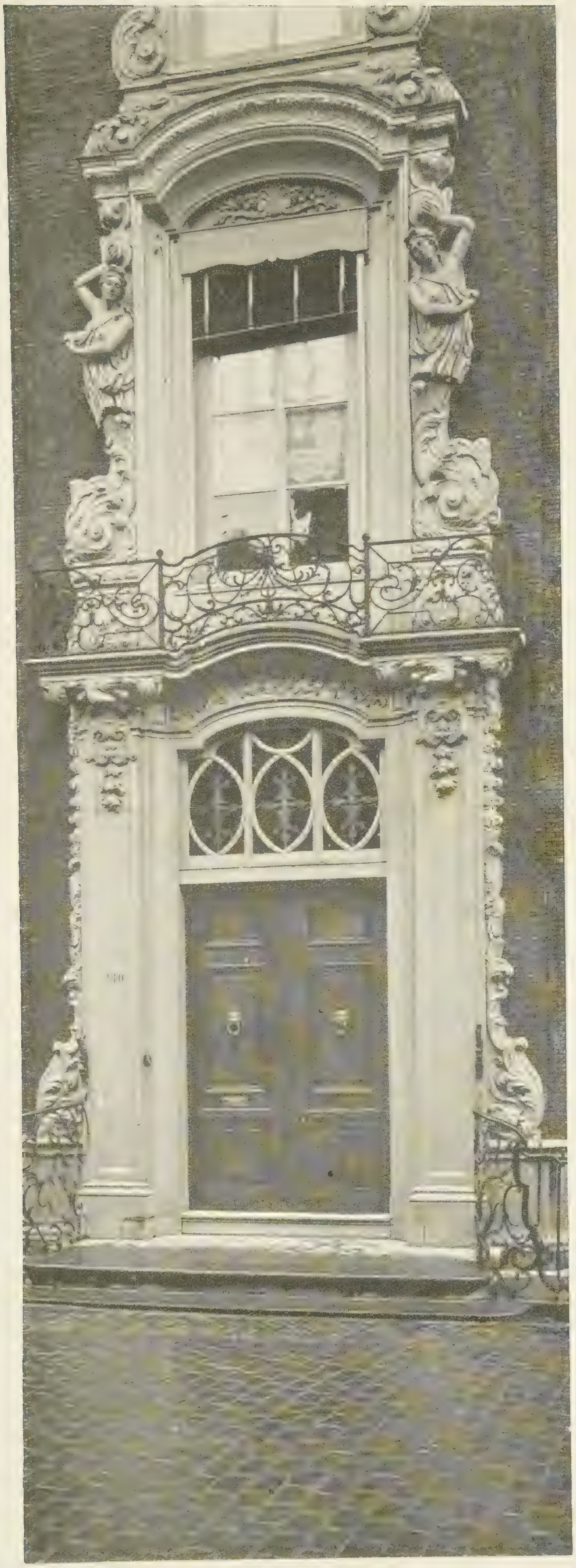
The city of Buenos Aires is by no
the only favourable Argentine ma
present offering for manufactu
builders' machinery. The second
the Republic, Rosario, is a city
180,000 people, and here in a few
time great activity will be notice
connection with wide extensions
improvements in, the port-works.
some 214 miles from Buenos Ai
river, Rosario is a rapidly growin
and calls for practically everything
engineering and allied trade lines
its greater sister and rival city.
there are the hardly less importan
of Cordoba, with 100,000 inhabita
Plata, with 99,800; Tucumán,
Bahia Blanca, 73,000; Mendoza,
Santa Fé, 49,000; Salta, 40,000;
35,800; Corrientes, 30,000; San
15,700; and San Luis, 14,500.

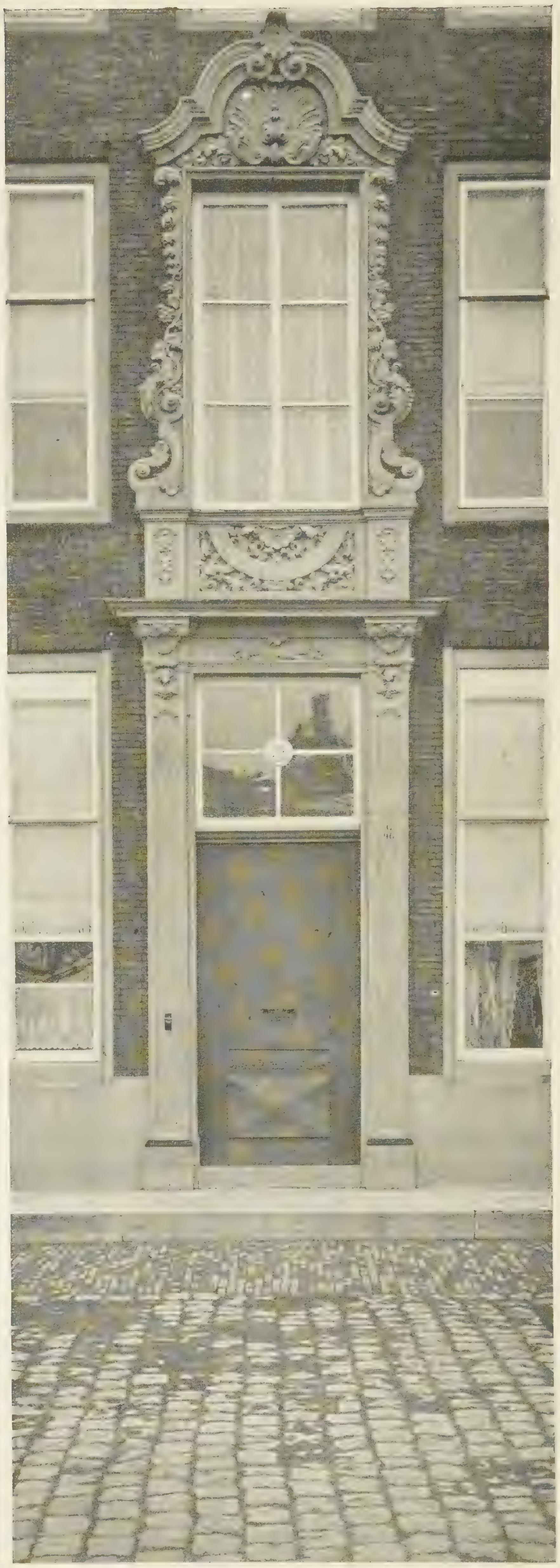
DEATH OF SIR SWINTON JA

Colonel Sir Samuel Swinton
K.C.I.E., C.V.O., died at Weybri
week, in his seventy-seventh year
Swinton Jacob's name came int
prominence in connection with dis
as to the most fitting architecture
new Indian capital at Delhi, an
were many strong advocates of an
Indo-Saracenic style. The Secr
State associated him with Mr.
and Mr. Baker in preparing archi
plans, but after a short time he
from the work on account of
health. He married, in 1874,
daughter of Mr. Robert Brown,
burgh, who survives him.

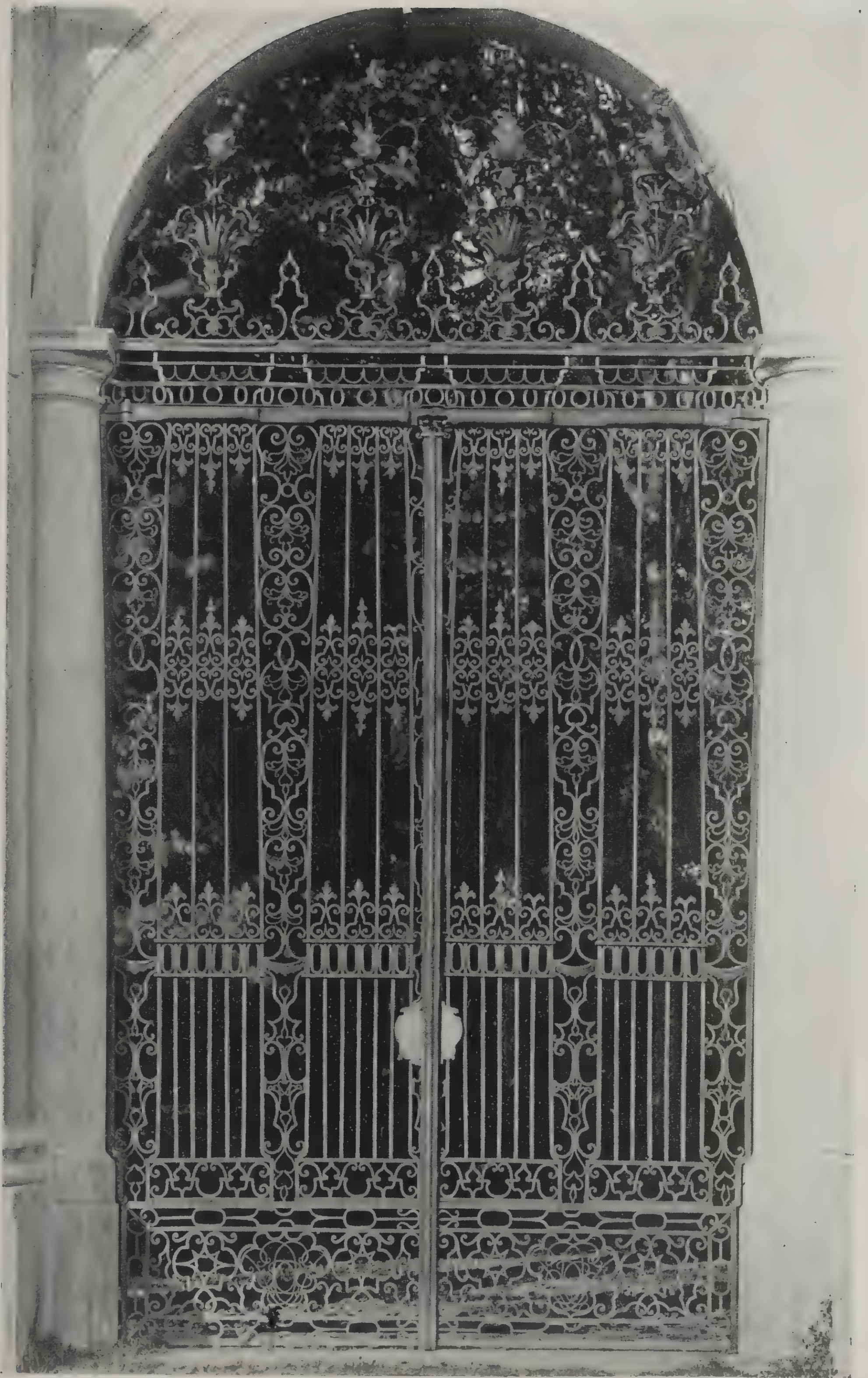


COMMUNAL WASH-HOUSE AT HAMMERSMITH, LONDON.


Doorway to House in Voorstraat, Dordrecht.


Doorway to Hetwyn Kooper's House, Middelburg.

DETAILS OF CRAFTSMANSHIP (SERIES III.). *III.*—TWO DUTCH DOORWAYS.



DETAILS OF CRAFTSMANSHIP (SERIES III.). IV.—WROUGHT-IRON GATE FROM THE VILLA PISANI, STRÀ, ITALY.

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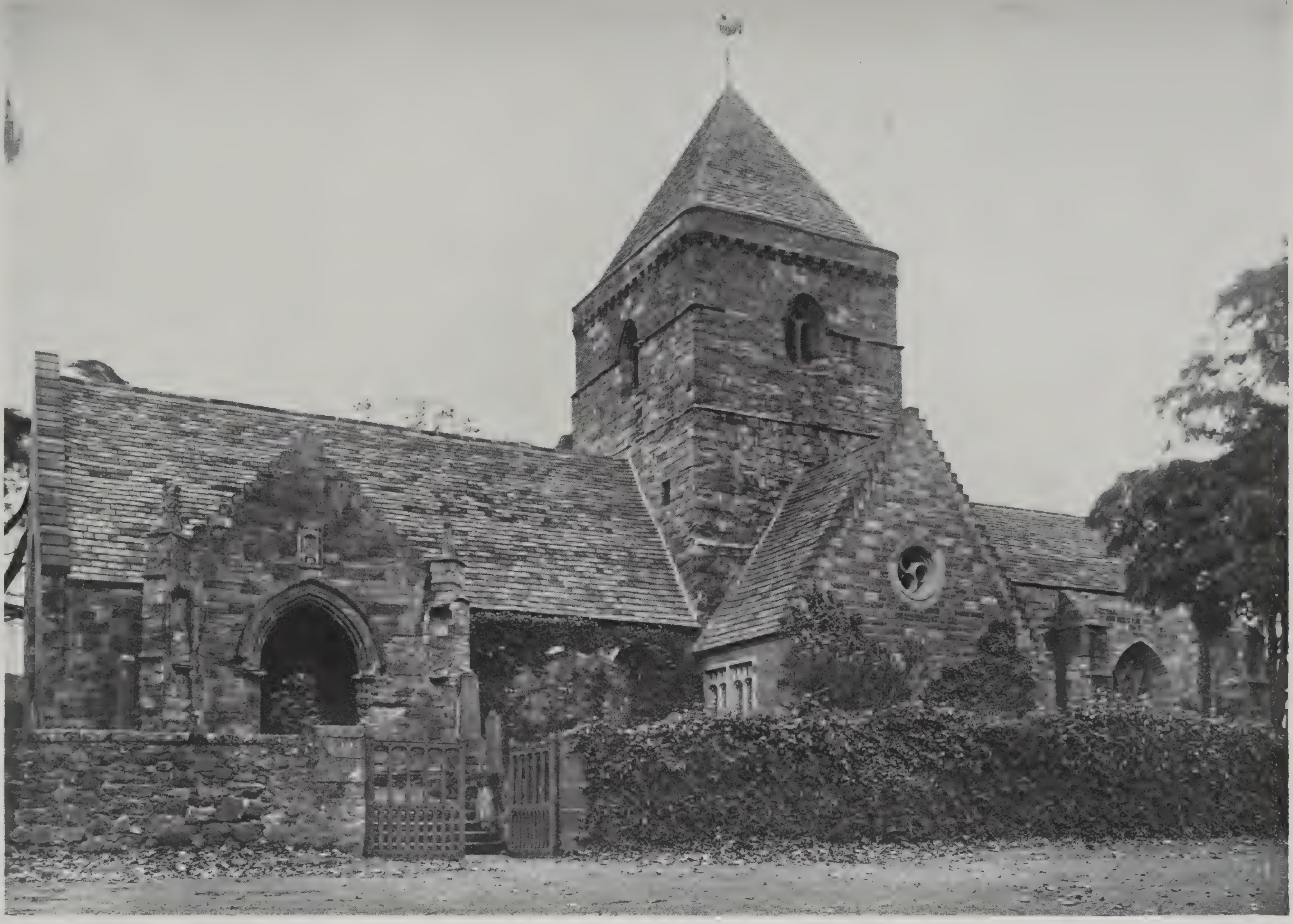
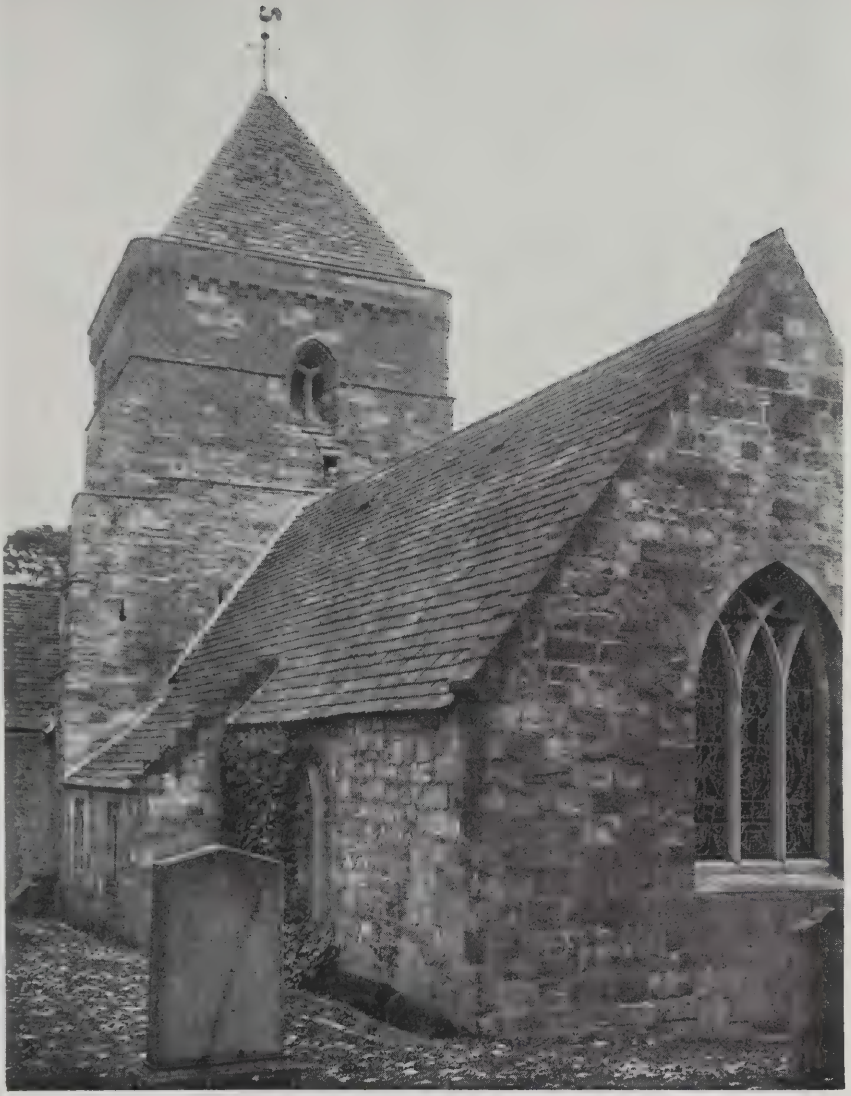


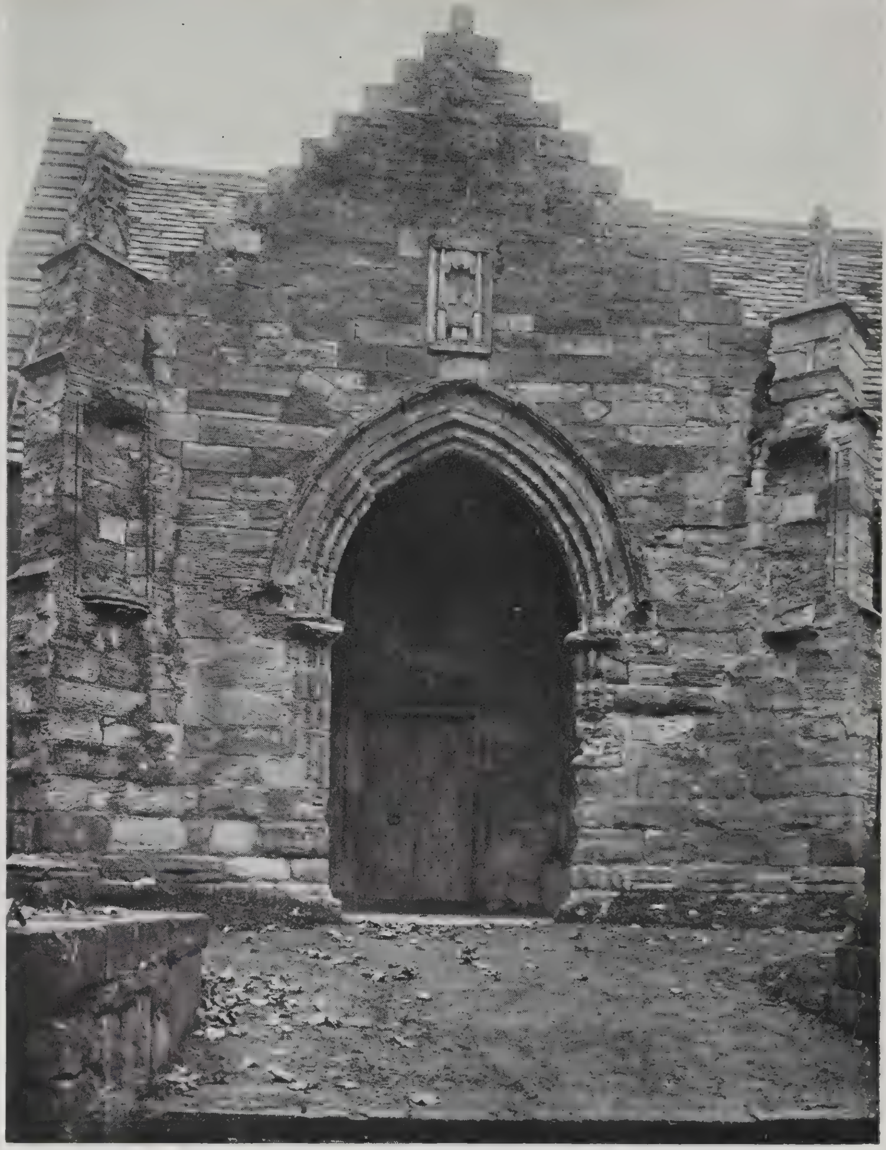
Photo: Drummond Young and Watson.

CURRENT ARCHITECTURE (SERIES IV.). XXXIX.—RESTORATION OF WHITEKIRK CHURCH, EAST LOTHIAN.

SIR ROBERT LORIMER, A.R.S.A., F.R.I.B.A., ARCHITECT.



View from North-west.



Photos: Drummond Young and Watson.

Detail of Porch.

CURRENT ARCHITECTURE (SERIES IV.). XL.—RESTORATION OF WHITEKIRK CHURCH, EAST LOTHIAN.

SIR ROBERT LORIMER, A.R.S.A., F.R.I.B.A., ARCHITECT.

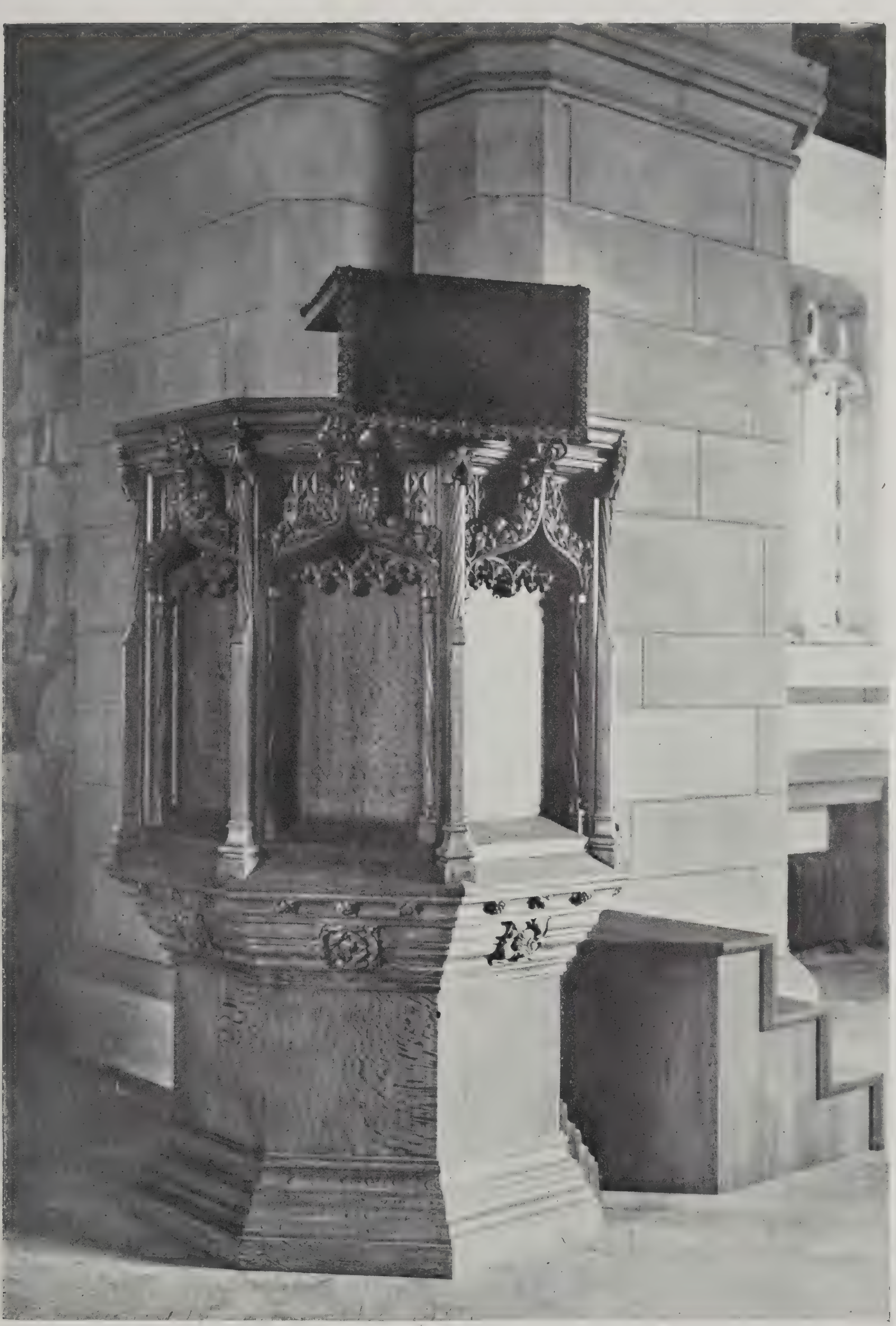


Photo: Drummond Young and Watson.

CURRENT ARCHITECTURE (SERIES IV.). XLI.—RESTORATION OF WHITEKIRK CHURCH, EAST LOTHIAN: THE PULPIT.

SIR ROBERT LORIMER, A.R.S.A., F.R.I.B.A., ARCHITECT.

ARCHITECTURAL AND BUILDING EVENTS OF THE YEAR.

T will be seen from this brief survey of the year's architectural events that the items are of very considerable interest, notwithstanding the overshadowing influence of the war, and in spite of the scarcity of normal opportunities for profes- nal activity. The one really great event of the year, arfing everything else, is, of course, the crystallisa- n of the national housing problem—the determina- n of the Government to take the matter in hand, l its wise application to the Royal Institute for ice and assistance. A short summary of the events ling up to this development naturally takes the fore- st place in these "abstract and brief chronicles."

National Housing.

n May 11, Lord Rhondda, as President of the cal Government Board, received a deputation from National Housing and Town Planning Council, ch put before him a housing programme that had n formulated as the result of a series of conferences d in various parts of the country. During the mer the Local Government Board issued to local horities a circular requesting a statement of housing uirements, and intimating that the State would vide financial aid. In September it was stated i-officially that the Government had invited the .B.A. to arrange a competition, or series of com- itions, with a view to securing model designs for king-class houses. In September also there was a i-official announcement that, at a private confer- e at the Local Government Board Offices, it was gnised that more than 200,000 houses would have e erected without delay, and it was hinted that a ernment scheme had been outlined. Shortly after- ds it was stated that Mr. Hayes Fisher had uested the Institute to appoint a representative to e on a committee which had been set up by the cal Government Board to consider various technical stions arising out of the housing problem, and that Aston Webb had been nominated by the Institute. the same time, the names of a special committee on sing formed by the Institute was published. The d societies were invited to nominate representa- s to serve on it.

Ve were able to state, in our issue of October 24, t the Government had definitely decided that the national housing scheme should be controlled directed by the Local Government Board, but ond the vague statements that, after the war, e 150,000 to 200,000 houses—the figure is put 300,000 by most authorities—will be required that the Government will be asked to grant a sidy of several million pounds, details are still ing.

t was not until November 5, however, when Mr. ry T. Hare delivered his first presidential ress to the R.I.B.A., that we got the first nal and official intimation that the Government placed at the disposal of the Institute an ade- te sum of money for procuring housing designs, that the Institute had drawn up a scheme for a es of competitions. Particulars of the first of series of competitions under this scheme were lished in our issue of November 14.

R.I.B.A. Transactions.

ollowing up a suggestion made by Professor W. Lethaby, the Council arranged for a series of informal conferences to be held at the Institute on subjects of interest to architects and of importance to the public. These conferences, which were held on Wednesday afternoons at fortnightly intervals, proved highly successful, and consequently have been renewed for the present session, the new series being opened on November 22 by Mr. Sidney Webb with a masterly address on "The Functions of an Architectural Society."

The annual report, published in our issue of May 2, showed that the council had done excellent work in the interests of members, and that, in particular, it had at length got into touch with the Government—a fact that was more strikingly revealed by the announcement that the Institute had been invited to conduct a competition for designs to be used in the Government housing scheme.

On the entry of America into the war, the Institute sent a letter of fraternal greeting to the American Institute of Architects, which was equally cordial in its response.

Architectural Association.

The Association (which during the autumn removed from Great Smith Street to Bedford Square) issued, in January, a report containing suggestions for dealing with the requirements of members of the profession after the war. The main points considered were: (1) Providing facilities for bringing assistants and employers into touch; (2) helping the temporarily disabled and unfit; (3) helping the totally disabled; (4) coaching those who, after years of service in the war, might feel the need of further professional training.

Society of Architects.

In their annual report, presented on January 11, the Society of Architects stated that they had endeavoured to arrange for a conference with the R.I.B.A. on registration and other matters, but the Institute was unable to comply with the request, as it had determined to suspend, during the war, the discussion of controversial matters. The Society shows a disposition to proceed independently with a Registration Bill.

Institute of Scottish Architects.

In June the newly formed Institute of Scottish Architects, held in Edinburgh its first annual convention, with Sir Rowand Anderson as its first president.

Architects' Reorganisation Committee.

An Architects' Reorganisation Committee, representative of all the architectural societies in London and the provinces, was formed in the autumn, with Mr. C. Macarthur Butler (secretary of the Society of Architects) and Mr. F. R. Yerbury (secretary of the Architectural Association) as joint hon. secretaries. Its main object is the after-the-war re-establishment of architects in practice.

Sydney Chair of Architecture.

Early in the year it was announced that the Government of New South Wales had granted an endowment of £2,000 a year for a Chair of Architecture at Sydney University, and it is claimed that this is the first occasion of a Government of the British Empire recognising the national importance of architecture.

National Federation and the National Form of Contract.

At the annual general meeting of the National Federation of Building Trades Employers, held in London at the end of January, progress was reported with respect to the revision of the general form of contract, and it was decided to ask the Institute of Builders to unite with the Federation in approaching the R.I.B.A. on the subject. The retiring president of the Federation, Mr. W. F. Wallis, J.P., was succeeded by Mr. James Storrs, J.P., of Stalybridge. Mr. A. G. White, the able secretary of the Federation, has added to this function that of secretary to the Institute of Builders, succeeding Mr. Thomas Costigan.

Government Restrictions on Materials and Labour.

Early in the year the Government issued stringent regulations with respect to the sale and purchase of lead, and demanded monthly returns of all transactions relating to this metal. A little later the control of timber was assumed by the Army Council.

In April it was announced that the Director of Timber Supplies had decided to institute a monthly census of stocks of timber. Further restrictions on timber were ordered by the Army Council on April 14; in August the Board of Trade took over all stocks of various woods exceeding in the aggregate 5,000 ft., and a new Government order regulating the prices of timber was issued in December, and was published in our issue of December 12.

Consequent on timber restrictions, more than 500 representatives of wood traders attended a meeting held at the Cannon Street Hotel, London, in October, to consider the situation. Resolutions were adopted asking: (1) That the traders should be allowed to carry on their business with a minimum of Government interference consistent with national necessities; (2) that unrestricted importation of wood should be permitted, and Government control of stocks limited; and (3) protesting against Government control of British and foreign timber after the war.

In November, the Minister of Reconstruction, in consultation with the President of the Local Government Board and the Secretary for Scotland, appointed a committee to consider and report on the supply of building materials after the war. Mr. James Carmichael, J.P., vice-chairman of the Munitions Works Board, was appointed chairman of the committee, which included Mr. James Storrs, the president of the National Federation.

A list of restricted occupations issued by the Ministry of Munitions in March, prohibiting the employment of any new workers except for work of national importance, included most of the building trades.

Photographs at the Academy.

In this year's Royal Academy exhibition, photographs of architectural work were admitted for the first time—rather, it is to be feared, as an expedient for preventing bare walls than in recognition of the claims of the camera.

New Type of L.C.C. School.

On the recommendation of its building committee, the London County Council Education Committee resolved (it was announced last March) to adopt a cheaper type of school building, of which the cost would work out at £11 4s. 9d. a head, as against the customary fifteen guineas. As this was to be done at the expense of all embellishment, the economy would seem to be merely nominal, and of very questionable wisdom.

Hutments Contracts.

The report of the Royal Commission appointed to inquire into the question of hutments contracts, about which some wild statements had been made in the Press, was published on April 16. It showed co sively that the charges which had been brought ag Sir John Jackson in the daily Press were groundle

Reinforced Concrete.

The versatility of reinforced concrete has further extended by adapting it to the constructi seagoing vessels; and its use in the construction school at Birmingham is said to have made the buil bomb-proof. Experience has shown that, at any this material has justified the confidence in it by en ing direct hits as well as vibration shocks, during raids, with extraordinary immunity from damage.

Legal.

The most important law case of the year was in which the Metropolitan Water Board sough show that the stoppage by the Ministry of Munit of operations by Messrs. Dick, Kerr and Co., at reservoirs at Littleton, did not determine the tract, and that therefore the plant on the job vested in the Water Board. Ultimately, in the H of Lords, in November, the decision was in favo the contractors; the finding of the Court of Ap which had reversed that of Mr. Justice Bray, b upheld.

There have been several prosecutions for con vention of the building restrictions order, and some cases heavy fines have been inflicted.

An obsolete by-law was demolished as a resul an action brought by the Governors of Repton Sc against Repton U.D.C. The by-law requires t there shall be a specified air-space behind a building but a building Act makes an addition a building, and so we arrive at the ridiculous posi that, though your building may have acres of par the back of it you may not project its front, beca you cannot give the "new building" the required space! This was too absurd for Mr. Justice Bailha who decided in favour of the school governors, suggested that the subsequent Act had made by-law unworkable.

Miscellanea.

On March 13, the reintroduced Charing C Bridge Bill was read a second time by 128 votes aga 56—a result mainly due to the apathy of the L.C. and the Westminster City Council. The second re ing in the Lords was passed on June 14, by 53 aga 19.

Advisory committees to assist the Ministry Labour in the administrative work of the Lab Exchanges were selected from men of note am employers and workmen, the committees deliberat independently.

The centenary edition of Laxton's Price Book issued this year. New editions of Marsh and Dun manual on reinforced concrete, and of Taylor Thompson's work on the same subject were issu and an important work on "Modern Industrial Bu ings," by Mr. Moritz Kahn, assembled for the fi time a number of striking examples of mod factory construction.

Obituary.

The obituary of the year includes the followi notable names: Mr. S. Stevens Hellyer, the sanita engineer; Mr. E. R. Robson, formerly architect to London School Board; Mr. Lisle March Phillip writer on art and architecture: M. Hippolyte Bla long a leading figure among Edinburgh architec Mr. Howard Chatfeild Clarke, one of the best-kno "all-round practitioners" in London; Sir A. Binnie, from 1890 to 1901 chief engineer to the Lo don County Council; Mr. Walter Lewis Spie curator of Sir John Soane's Museum since 190 Degas and Hemy the painters, and Rodin greatest of modern sculptors.

ARCHITECTS FALLEN IN THE WAR.

IE following is a list (incomplete, it is feared) of those architects, architectural assistants, and students who have fallen in the War ng the past year:

eby, 2nd Lieut. Sidney Derrick, killed in tion.

nson, Lance-Corporal Beaumont E., killed in tion September 23.

er, Private Thomas Christopher, killed in tion August 4, aged thirty-six years.

nett, Lieut. James (A.R.I.B.A.), killed in action vember 28.

lle, 2nd Lieut. Alfred Geoffrey (Probationer I.B.A.), killed in action on Easter Sunday, 17, aged twenty years.

ke, Capt. Walter Llewellyn (A.R.I.B.A.), lled in action.

vell, 2nd Lieut. Charles Joseph Morton R.I.B.A.), killed in action September 12.

ant, Capt. Arthur Michael (Royal Engineers), R.I.B.A.), killed in action.

n, Capt. Charles William, killed in action, aged hirty-five years.

er, Lieut.-Colonel Victor Augustine (D.S.O.), lled in action August 5.

att, Edward (Licentiate R.I.B.A.), killed serving at battery in Flanders, September 12.

ell, Lieut. Reginald, accidentally killed while ing for his pilot's certificate.

Hill, Staff Sergeant Claude Edgar (R.A.M.C.), killed in action September 3.

Honan, Capt. Matthew (South Lancashire Regt.) (A.R.I.B.A.), severely wounded and missing.

Houston, 2nd Lieut. William Wylie, killed in action August 17.

Johnson, Capt. Ronald Lindsay (R.F.A.), killed in action May 28.

Meikleham, Lance-Corporal David Lang, killed in action.

Moodie, 2nd Lieut. John (Student R.I.B.A., 1908), died of wounds August 27.

O'Brien, Edward (R.A.M.C.), died on service.

Owen, Lieut. Meurig, killed on August 21, aged twenty-one years.

Papworth, 2nd Lieut. Alfred Wyatt, reported killed April 11.

Pywell, Private William Jackson, killed in action February 8, aged thirty-two years.

Sturgeon, Capt. Robert Victor (A.R.I.B.A.), killed in action.

Tucker, Arthur Haines, killed in action October 9.

Wilson, 2nd Lieut. John Hardy, killed in action April 7, aged thirty-three years.

Wray, 2nd Lieut. Ernest Warnford (R.I.B.A. Measured Drawings Medallist, 1909), killed in action August 23.

Wright, 2nd Lieut. Cecil Laurence, killed in action July 7, aged thirty-seven years.

MILITARY DECORATIONS, ETC., FOR ARCHITECTS.

IE following is a list of military decorations, etc., gained by architects, architectural assistants, and students, during the past year:

, Capt. David McLeod (Royal Engineers) R.I.B.A.), mentioned in Dispatches.

glas, Major J. W. (member of the Northern A.), awarded the D.S.O. and the Serbian der of the White Eagle.

ant, the late Arthur Michael, mentioned in spatches.

erstonhugh, Staff Capt. H. L. (A.R.I.B.A.), arded Military Cross.

er, Capt. Stanley Howe, mentioned three times Dispatches and awarded Military Cross.

, Lieut. H. A., awarded Military Cross.

ier, Capt. Cecil (Student R.I.B.A.), awarded Serbian Order of the White Eagle.

tt, Lieut.-Col. T. Cecil, awarded the D.S.O.

back, Brigadier-Gen. Arthur B. (F.R.I.B.A.), arded the Most Distinguished Order of St. ichael and St. George.

y, 2nd Lieut. Williams James (Royal En- neers), awarded Military Cross.

, Lieut. Gordon, awarded Military Cross.

Mann, Lieut. Harry W., mentioned in Dispatches.

Mauchlin, Capt. R., awarded Military Cross.

Moss, Lieut. Vincent Newton, awarded Military Cross.

Rahbula, 2nd Lieut. Rahles, awarded Military Cross.

Ridley, Capt. Basil White, awarded Military Cross.

Rogers, 2nd Lieut. William Herbert, mentioned in Dispatches.

Rosenthal, Brigadier-Gen. Charles, mentioned three times in Dispatches, awarded C.B. and C.M.G.

Runton, Capt. Percy T., mentioned in the "Gazette."

Russell. 2nd Lieut. Robert Tor (I.A.R.O.), awarded D.S.O.

Triscott, 2nd Lieut. Harris Stephens, awarded bar to Military Cross.

Waterhouse, Capt. Michael (Sherwood Rangers), awarded Military Cross.

Webb, Capt. Maurice E., awarded Military Cross.

Woolatt, 2nd Lieut. John (Royal Engineers), awarded Military Cross.

Young, 2nd Lieut. awarded Military Cross.

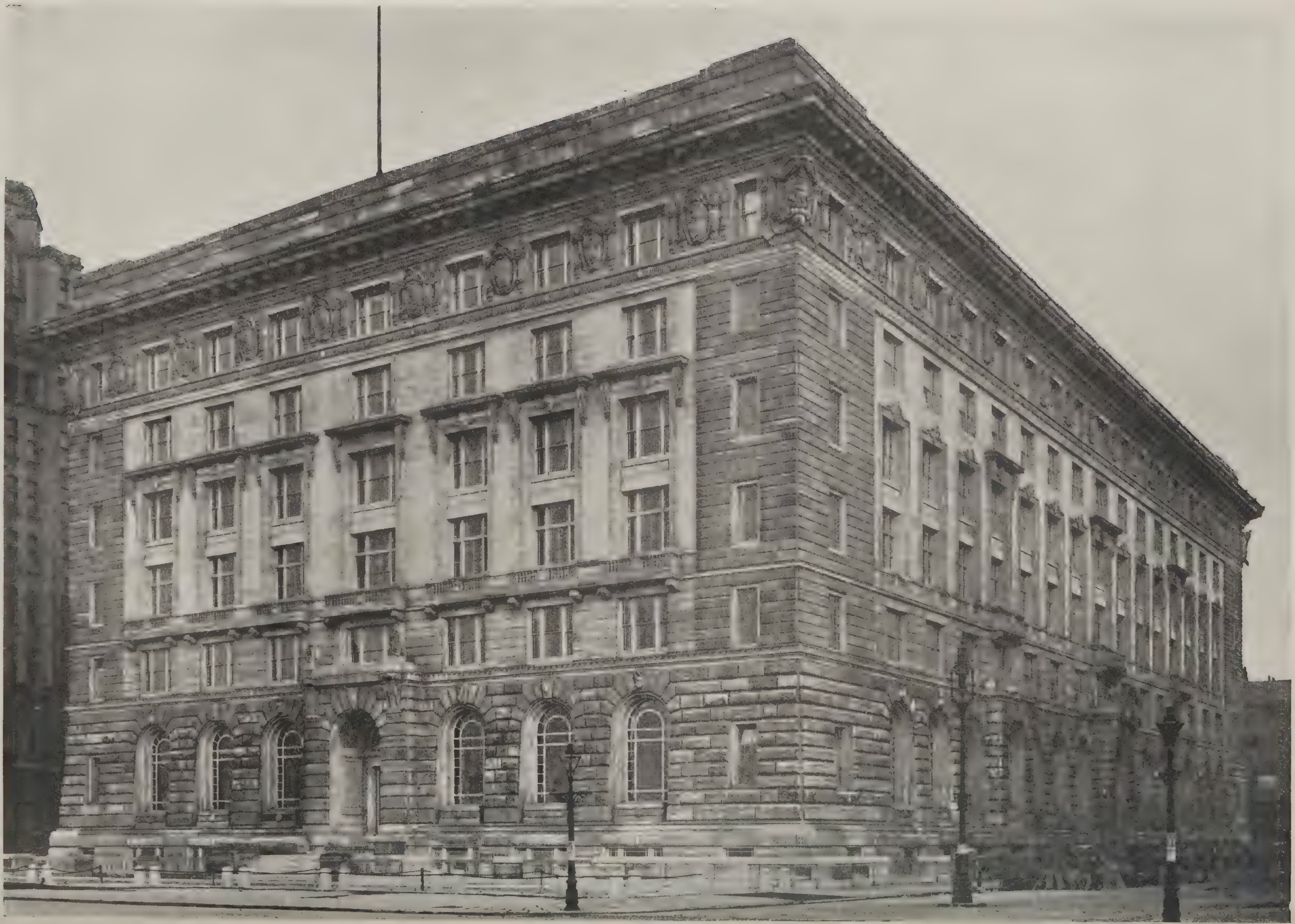


Photo : Bedford Lemere.

THE NEW CUNARD BUILDING, PIER HEAD, LIVERPOOL.

WILLINK AND THICKNESSE, FF.R.I.B.A, AND MEWÈS AND DAVIS, ASSOCIATED ARCHITECTS.

THE NEW CUNARD BUILDING, LIVERPOOL.

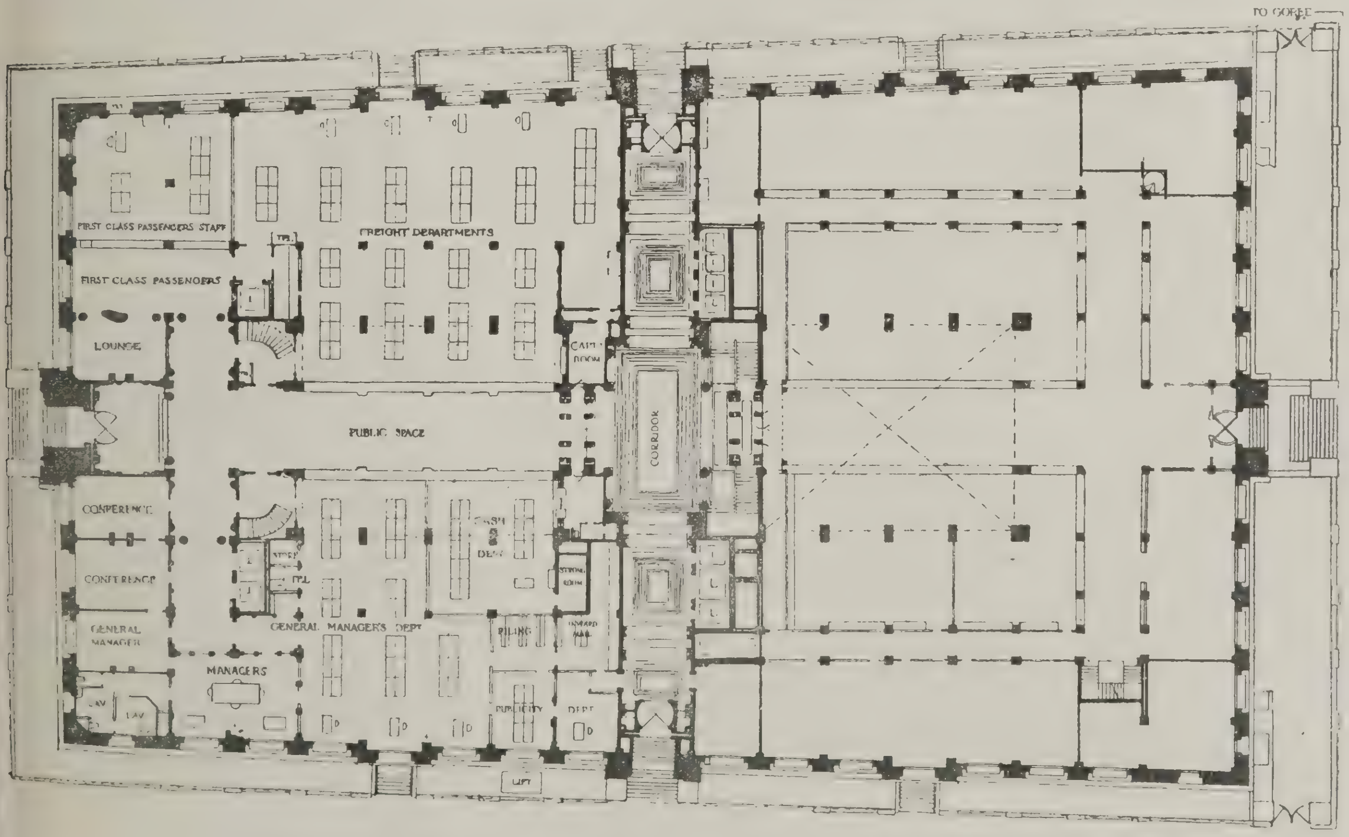
THE Cunard Steamship Company's new building, which has been erected on the Pier Head, Liverpool, is a work of the first magnitude; nothing of igher architectural importance has been done since he outbreak of war. It is a striking exposition of the heory, for which McKim was so masterly a proagonist, that a fusion of the Classic traditions offers he best promise of development towards a modern tyle.

The only projections of plan beyond the external urface planes are formed in the centre of each façade y the axially disposed entrances, and by a slight dvancement of the middle bays of the ground-floor rcade, between the lateral doorways and the angles of he building. From the first-floor level the angles are trengthened by the continuance of a wide strip of ustication up to the soffit of the architrave. Above he architrave a fenestrated frieze is emphasised by eavy shields, which on the river front bear the arms f the Allies. The four angle shields are ornamented vith the insignia of the Cunard Company, and are supported by eagles. Surmounting the frieze is a strong ornice of the Tuscan palazzo type, its corona marked t intervals by a ship's prow in place of the traditional ion's head; a moulded blocking, slightly raked, holds own the cornice. Portland stone has been used hroughout, coarse Roach-bed for the rustication, and Vhit-bed for the remainder.

The planning is for the most part simple, direct, and arge in its parts. There are four main entrances (with otary doors), one in the centre of each façade. The ransverse and longitudinal axes of the building pass hrough the entrances. On the transverse axis is estalished a corridor 20 ft. wide, 22 ft. high, and 200 ft. ong, with a central traffic hall. Lifts occupy a portion f one side of the corridor, and a staircase is placed on he same side of the hall. From this hall and corridor ll the offices on each floor can be approached. Light vells, approximately 65 ft. by 55 ft. in area, flank the central position. Of the ground floor the Cunard Company occupy the western half, with an entrance from the river front; in the eastern half will be housed the Pacific Steam Navigation Company, having their main entrance at the other end of the long axis. The Cunard Company also occupy two-thirds of the lower ground floor, a section of the basement, and the whole of the fifth floor. As, besides being the owners, they are also the principal occupants of the building, the disposition of their quarters is of chief interest.

Parallel to the central transverse avenue on the ground floor is a second corridor at the west end, separated from the river-front entrance by a vestibule. One limb of the corridor admits to the general manager's rooms and to the lifts, which are for the exclusive use of the company and give access to the lower ground and fifth floors. The other limb leads to the first-class passengers' department and waiting-room. Staircases descend from the corridor down to the lower floors. A central opening, opposite the vestibule, connects it with the public space of the general office, which may also be approached at the opposite extremity from the central hall. The public office, designed to include the general manager's staff, cash, publicity, and freights departments, extends across the entire width of the building. Its central area receives illumination through a glazed roof from one of the two light wells. Piers support the superstructure. Glass doors are used throughout on the longitudinal axis, so that an uninterrupted vista is obtainable from end to end of the building.

Unquestionably the *pièce de résistance* of the fifth floor is the board-room. Its shape, colour, and detail make it the most successful of all the smaller rooms in the building. With elliptical ends, coved plaster ceiling, and lunettes, it is like an English translation of a Krafft interior. Russian oak, fumed to a dark brown, covers the walls in large panels; the Doric columns at either end and the door frames are also made of it.



THE NEW CUNARD BUILDING, PIER HEAD, LIVERPOOL: GROUND-FLOOR PLAN.
WILLINK AND THICKNESSE, FF.R.I.B.A., AND MEWÈS AND DAVIS, ARCHITECTS.

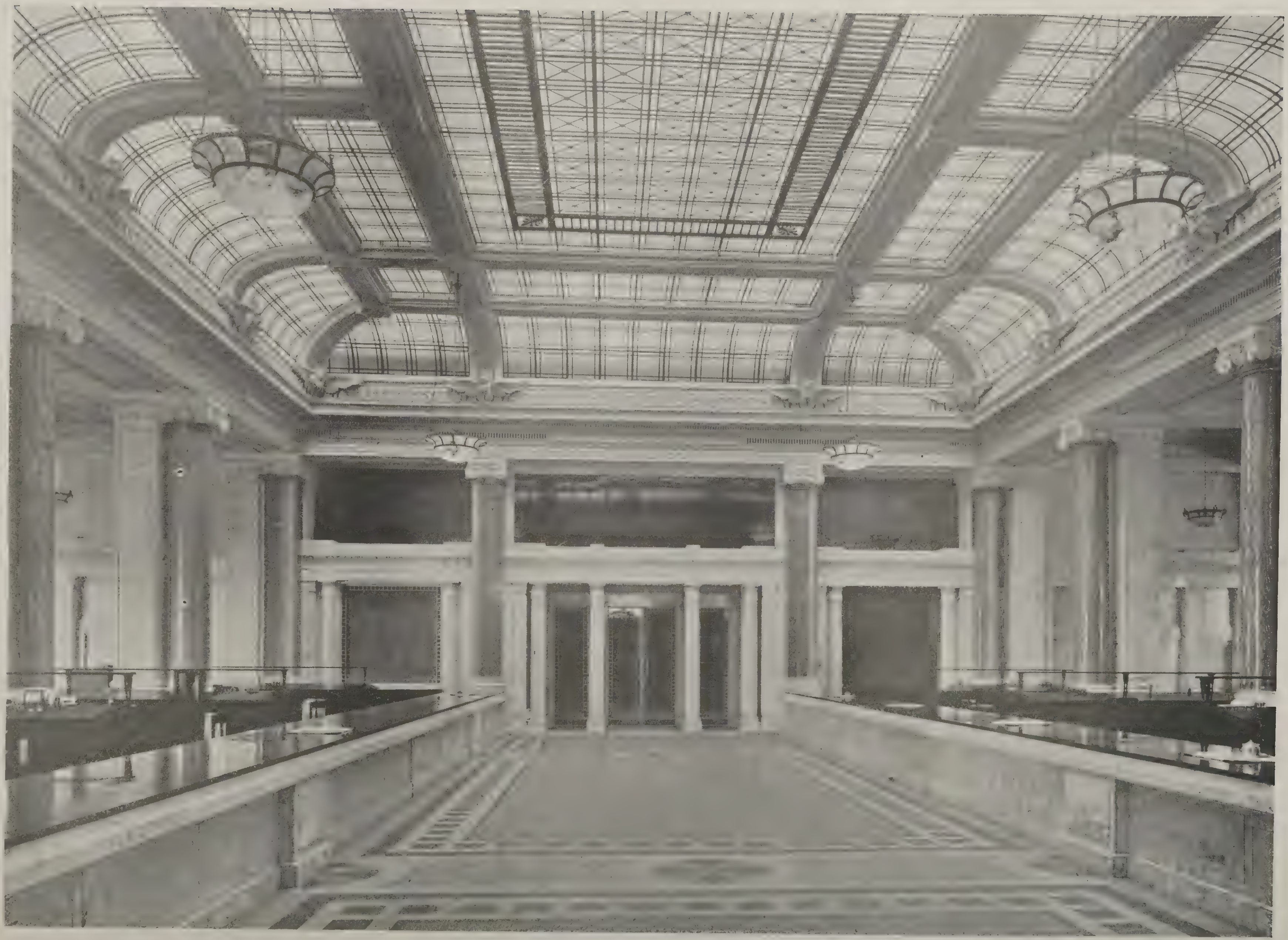


Photo: Bedford Lemere.

THE NEW CUNARD BUILDING, LIVERPOOL: PUBLIC SPACE IN GENERAL OFFICE.

WILLINK AND THICKNESSE, FF.R.I.B.A., AND MEWÈS AND DAVIS, ASSOCIATED ARCHITECTS.

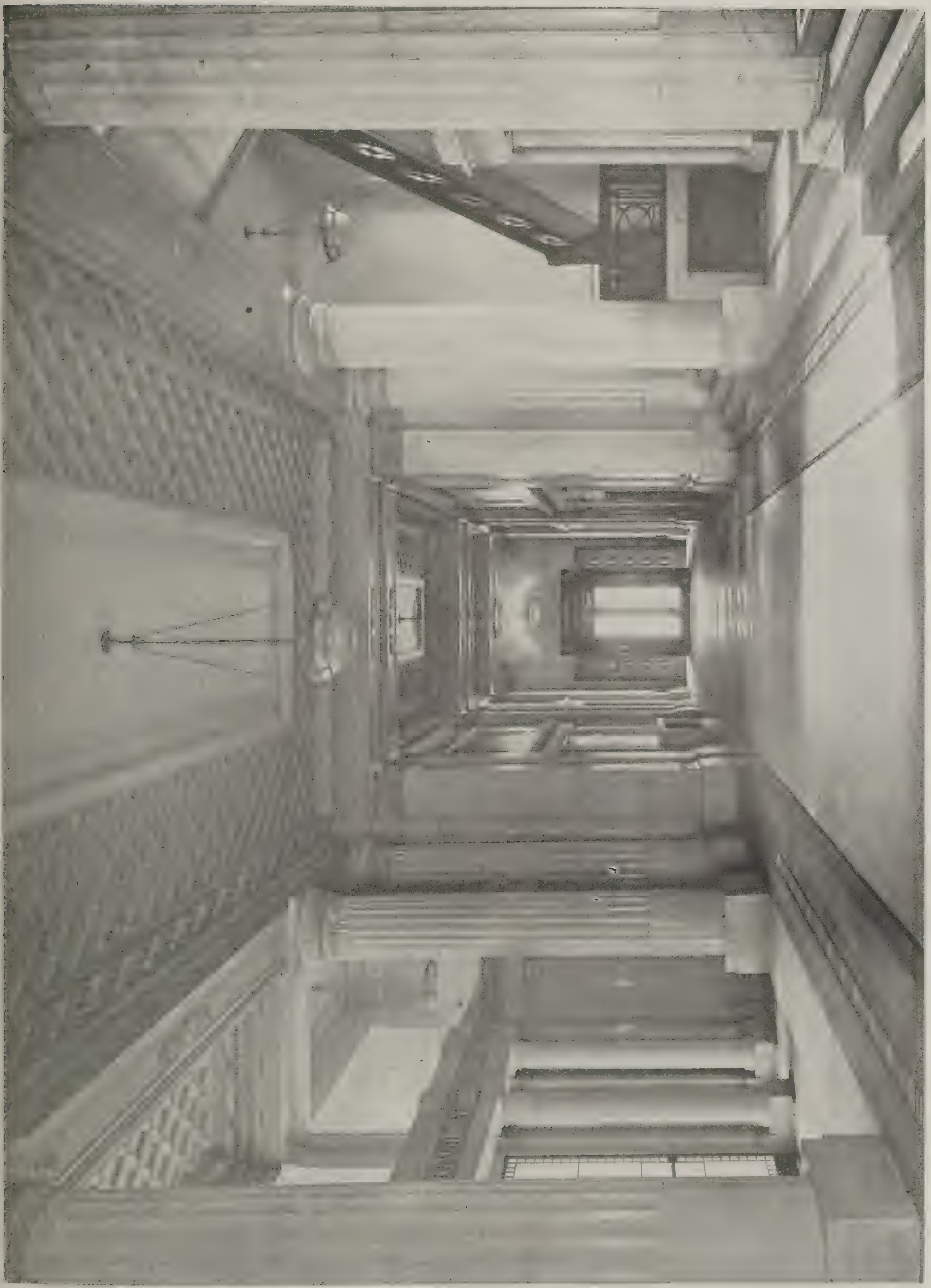


Photo: Bedford Lemere.

THE NEW CUNARD BUILDING, LIVERPOOL: MAIN HALL, LOOKING NORTH.

WILLINK AND THICKNESSE, FF.R.I.B.A., AND MEWÈS AND DAVIS, ASSOCIATED ARCHITECTS.

Particularly excellent are the consoles and entablature to the latter. In order to bring the shallow reticulation on the ceiling and the moulded borders of the lunettes into tone relation with the rest of the room, certain parts of the enrichment have been lightly picked out in brown.

The general contractors for the building were Messrs. W. Cubitt and Co., of London. The contractors and engineers for the reinforced concrete work, including the extensive floors, were the Trussed Concrete Steel Co., Ltd. (under the supervision of Mr. B. L. Hurst, M.Inst.C.E., A.M.I.M.E.), of London. The steelwork was supplied by Messrs. Francis Morton and Co., Ltd., of Liverpool. The whole of the Portland stone and granite was supplied from the quarries of the United Stone Firms, Ltd., of Bristol, and executed by them. All the plasterwork, both plain and decorative, including that in the Cunard general office, was executed by Messrs. George Jackson and Sons, Ltd., of London. Messrs. J. Whitehead and Sons, of London, executed in a Roman marble the columns, screens, architraves, and walls in the main corridor and staircase. Messrs. Bellman, Ivey, and Carter, of London, manufactured and fixed the columns and main pilasters in the Public Hall. Messrs. M. B. Bounds and Son, of London, carried out the marble work in the public hall. The main corridor and lavatory floors and the artificial stone plaster were executed by Messrs. The Art Pavements and Decorations, Ltd., of London. The entrance to the building and also the fifth floor were laid with "Rublino" by the Leyland and Birmingham Rubber Co., Ltd. The electric light and power installation was carried out under the supervision of the consulting engineers, Messrs. Albion T. Snell and Partners, by Messrs. Higgins and Griffiths, Ltd., of London. The wires are run throughout in heavy gauge screw-steel conduit, and have been carried out on the most modern principles of electrical engineering. The alabaster and bowl fittings supplied by this firm were specially designed to suit the architectural decoration. Electric light fittings were also made, to the architects' designs, by Messrs. Samuel Heath and Sons, Ltd., of Birmingham. They are all of one pattern, carried out in iron, coloured to match the other ironwork in the building. The plumbing work, hot-water supply, and fittings were carried out by Messrs. W. Griffiths and Sons, of Liverpool. The lift installation was carried out by Messrs. Waygood-Otis, Ltd., of London. A large number of office-pattern hat and coat lockers, finished stove enamel, in standard green colour, also a number of frictionless ball-race runners for sliding doors and windows, were supplied by Messrs. The Crittall Manufacturing Co., Ltd., of Braintree, Essex. Wood casements were supplied by Messrs. J. P. White and Sons, Ltd., of Bedford. Gates, railings, etc., were supplied by Messrs. W. Macfarlane and Co., of Glasgow. Clock cases were supplied by Messrs. Elkington and Co., Limited, of Birmingham. Messrs. Thornely and Furbur, of Liverpool, were the quantity surveyors for the building, and Mr. W. Riding, of Liverpool, was the clerk of works.

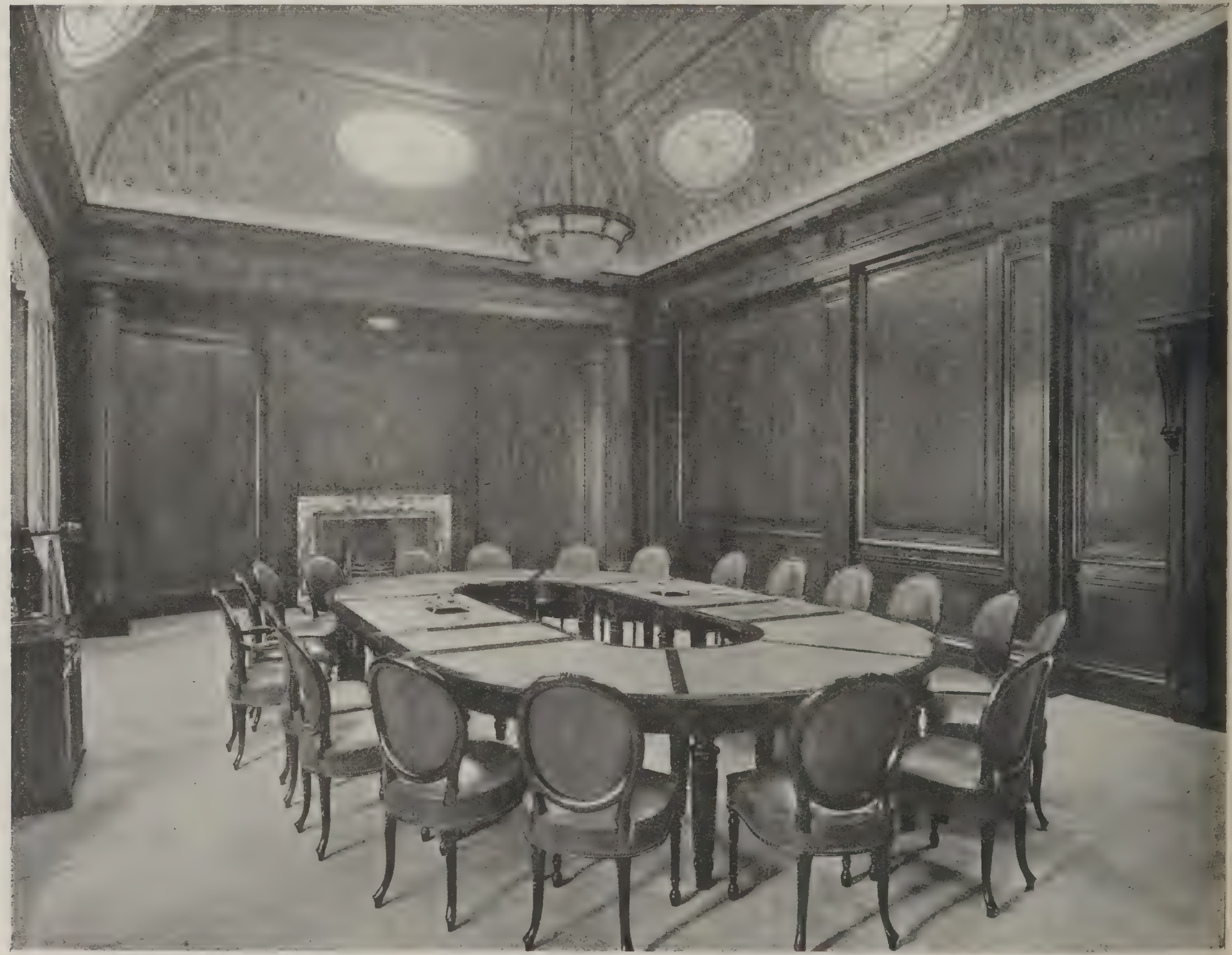


Photo: Bedford Lemere.

THE NEW CUNARD BUILDING, LIVERPOOL: THE BOARD ROOM.

WILLINK AND THICKNESSE, FF.R.I.B.A., AND MEWÈS AND DAVIS, ASSOCIATED ARCHITECTS.

THE AUSTRALIAN COMMONWEALTH BUILDING, LONDON.

CONSIDERABLE progress has been made during the past year with the erection of the Australian Commonwealth Building, in Aldwych, which is expected to be finished by May, 1918. The exterior of the building is carried out in Portland stone upon a base of trachyte, a greenish-grey stone resembling granite. It will be noted from the photograph of the Aldwych elevation, reproduced below, that the fronts which fill the arches on the ground-floor level are only temporary. This building, with its magnificent colonnade of coupled columns, fine cornice, and dignified Mansard roof, is well worthy of the commanding site upon which it stands. The sculpture on the exterior was executed by Mr. Bertram MacKennal, A.R.A., and Mr. Harold Parker. Other gentlemen who should be mentioned in connection with the work are: Mr. S. Bylander (consulting engineer for steelwork), and Capt. Riall Sankey, R.E. (consulting engineer). Messrs. Dove Bros., Ltd., were the general contractors, and following are the principal sub-contractors: Messrs. Redpath, Brown, and Co., Ltd. (steelwork); Messrs. Crittall and Co., Ltd. (heating); Messrs. Higgins and Griffiths (electric lighting); Messrs. Stitson White and Co. (sanitary and plumbing); Messrs. Jenkins and Son, Torquay (marble work for exhibition hall); Messrs. Wylie and Lochhead, Glasgow (first-floor joinery). Mr. William Stark is clerk of the works.

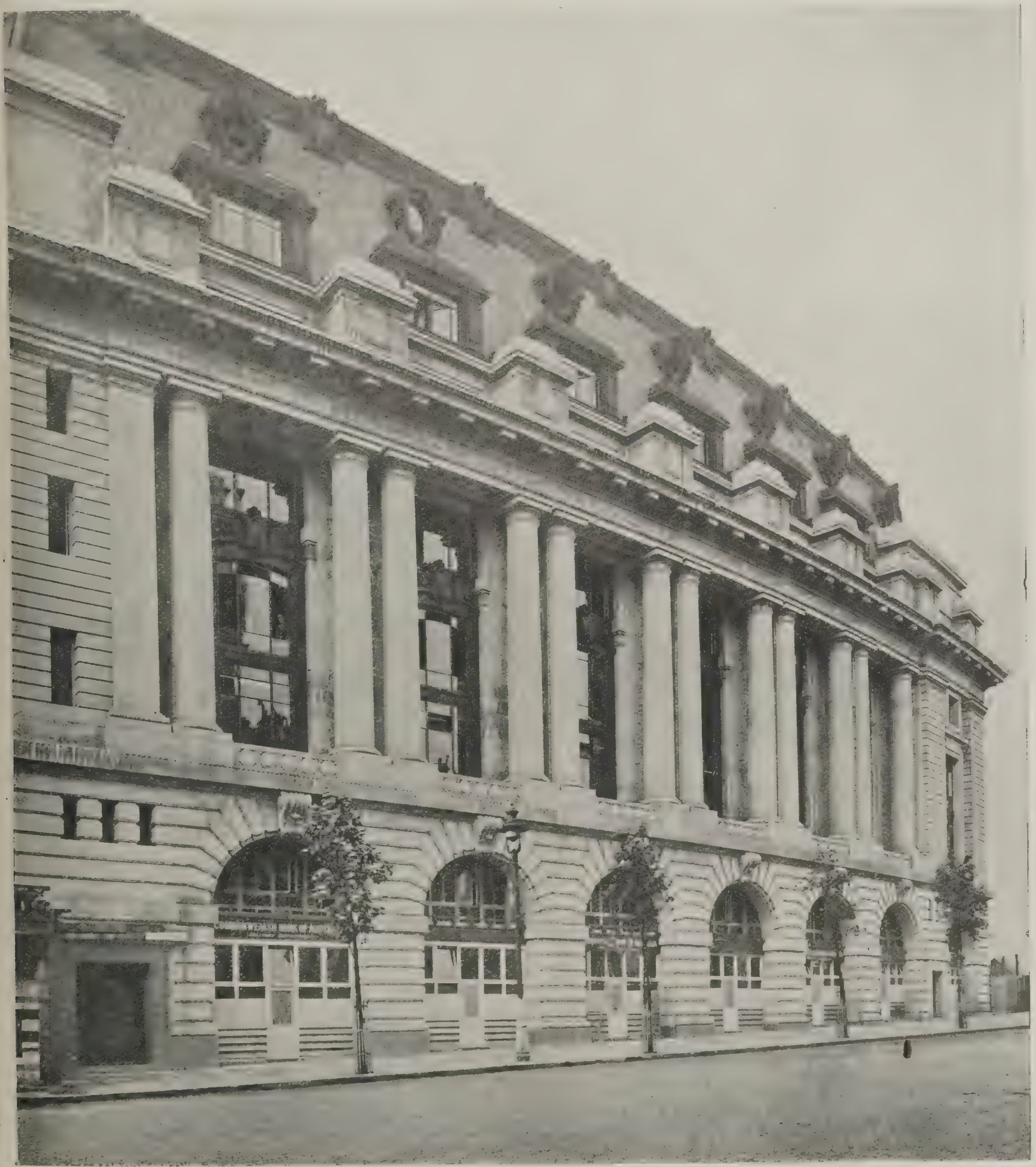


Photo: Bedford Lemere.

THE AUSTRALIAN COMMONWEALTH BUILDING, LONDON: ELEVATION TO ALDWYCH.

A. MARSHALL MACKENZIE, LL.D., A.R.S.A., F.R.I.B.A., AND A. G. R. MACKENZIE, F.R.I.B.A., ARCHITECTS.

COMPLETION OF THE NEW GOVERNMENT BUILDINGS, WESTMINSTER.

IT was so long ago as 1898 that the late John M. Brydon was appointed by the Government to design and carry out a great new block of public buildings in Westminster. Three years later, in 1901, he died, leaving his work barely risen above the level of the ground. Since then Sir Henry Tanner, Principal Architect to H.M. Office of Works, has been in charge, and under his able direction the work has now been brought to a successful completion.

The first portion was finished in 1908, and consisted of the front to Parliament Street, part of the front to Great George Street, the whole front to Charles Street, and more than half of the great circular courtyard. After the lapse of a total period of nineteen years, Brydon's great conception is completely realised. The suggestion that considerable changes and variations have been made from the original design has no foundation in fact; so far as the architecture is concerned, Brydon's design has been carefully and faithfully carried out.

The buildings occupy an important island site about five acres in extent, bounded on the east by Parliament Street, on the south by Great George Street, on the north by Charles Street, and on the west by St. James's Park.

These great buildings, of which we are now able to form a fair judgment, may, on the whole, be pronounced a success. The work, though by no means brilliant, possesses considerable dignity, as becomes a structure devoted to the service of the State. It is a good typical example of modern English Renaissance based on the work of Inigo Jones and Wren.

The west front, that facing towards St. James's Park, is the most satisfactory of all. It possesses a dignity

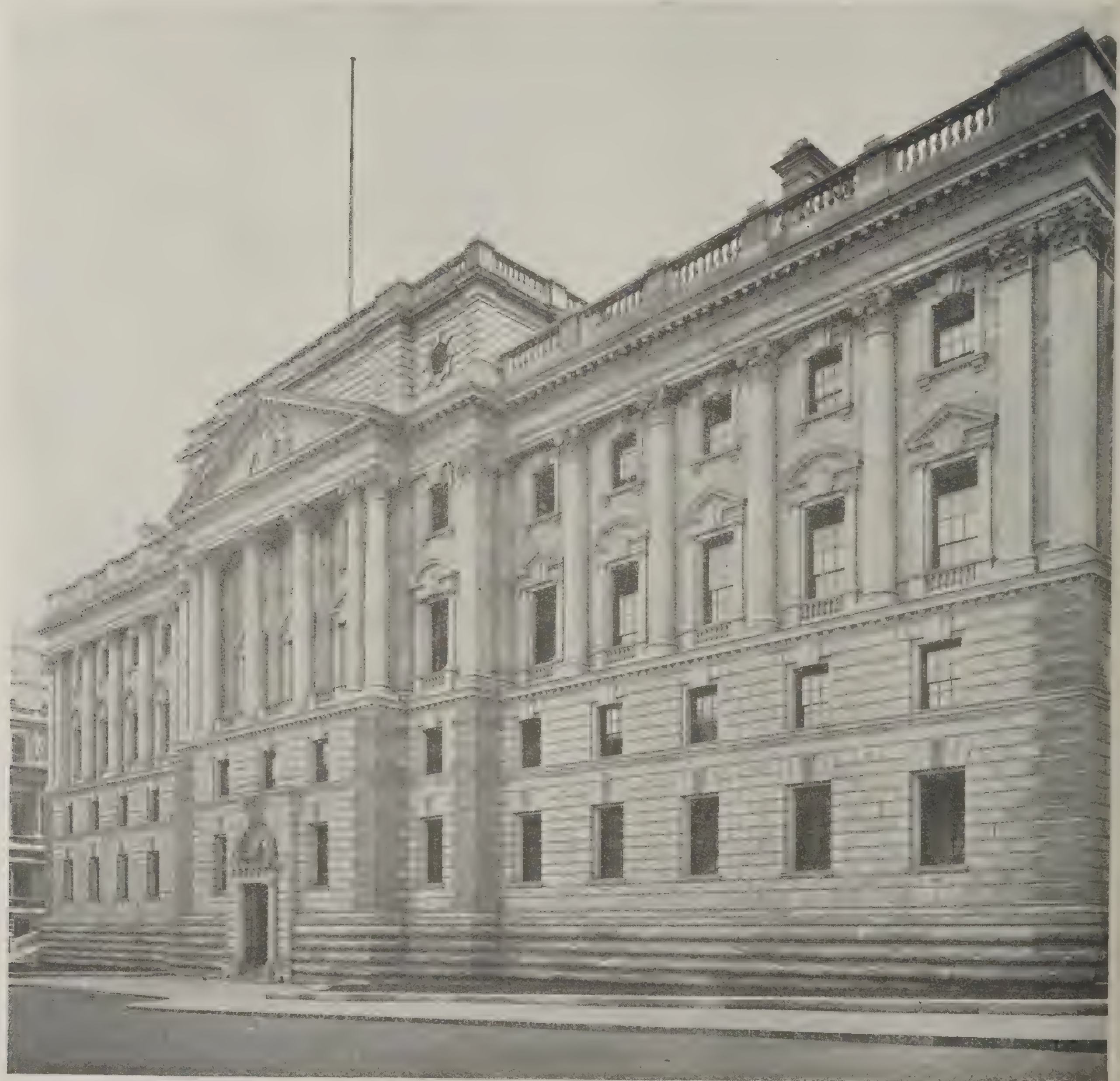


Photo: John H. Avery & Co.

COMPLETION OF THE NEW GOVERNMENT BUILDINGS, WESTMINSTER: ELEVATION TO ST. JAMES'S PARK.

(DESIGNED BY THE LATE JOHN M. BRYDON, F.R.I.B.A., AND COMPLETED BY SIR HENRY TANNER, I.S.O., F.R.I.B.A.)

which is not to be found in any of the other elevations. It is more or less a repetition of the Parliament Street façade, but without the end pavilions and towers, the urns that crown the attic storey, and the decorative panels between the second-floor windows. All these features have been omitted with considerable gain to architectural effect.

As a rule, towers that are hardly too large to be termed turrets do not, in our opinion, add to the dignity of a Renaissance building. To defend them as a device to relieve the general horizontality—and in most instances there is no other excuse for them—is to raise the question whether this effect is always desirable.

The building is constructed of brick faced with Portland stone, the floors being of ordinary concrete reinforced with rolled-steel joists. Reinforced concrete is used in the foundations and vaults, and in the retaining wall which runs the whole length of Great George Street. The light-wells are faced with white glazed bricks with stone dressings. There is a sub-ground level covered with asphalt flats and steel lanterns. The roofs are flat and covered with asphalt. All this asphalt work was executed by Messrs. The Limmer and Trinidad Lake Asphalt Co., Ltd., of London.

Messrs. Holloway Bros., Ltd., of London, were the general contractors for the superstructure, and they are to be congratulated on having carried through this important work to so successful a conclusion. The foundations were put in by Mr. F. G. Minter, of Putney, who also carried out the reinforced concrete work on the Kahn system, Messrs. The Trussed Concrete Steel Co., Ltd., of London, having supplied detailed drawings for this purpose. Work was executed by other sub-contractors as follows: Messrs. John Daymond and Son, of London (stone carving); Messrs. H. H. Martyn and Co., of Cheltenham (wood carving and plaster modelling); Messrs. H. J. Cash and Co., Ltd., of London (heating and hot-water supply installation and fire and steam mains); Messrs. The Leeds Fireclay Co., Ltd., of Wortley, Leeds (glazed brickwork); Messrs. W. Bainbridge Reynolds, Ltd., of London, and Messrs. George Wragge, Ltd., of Manchester (iron gates); Messrs. Waygood-Otis, Ltd., of London (lifts and cranes); Messrs. John Tann, Ltd., of London (strong-room doors).

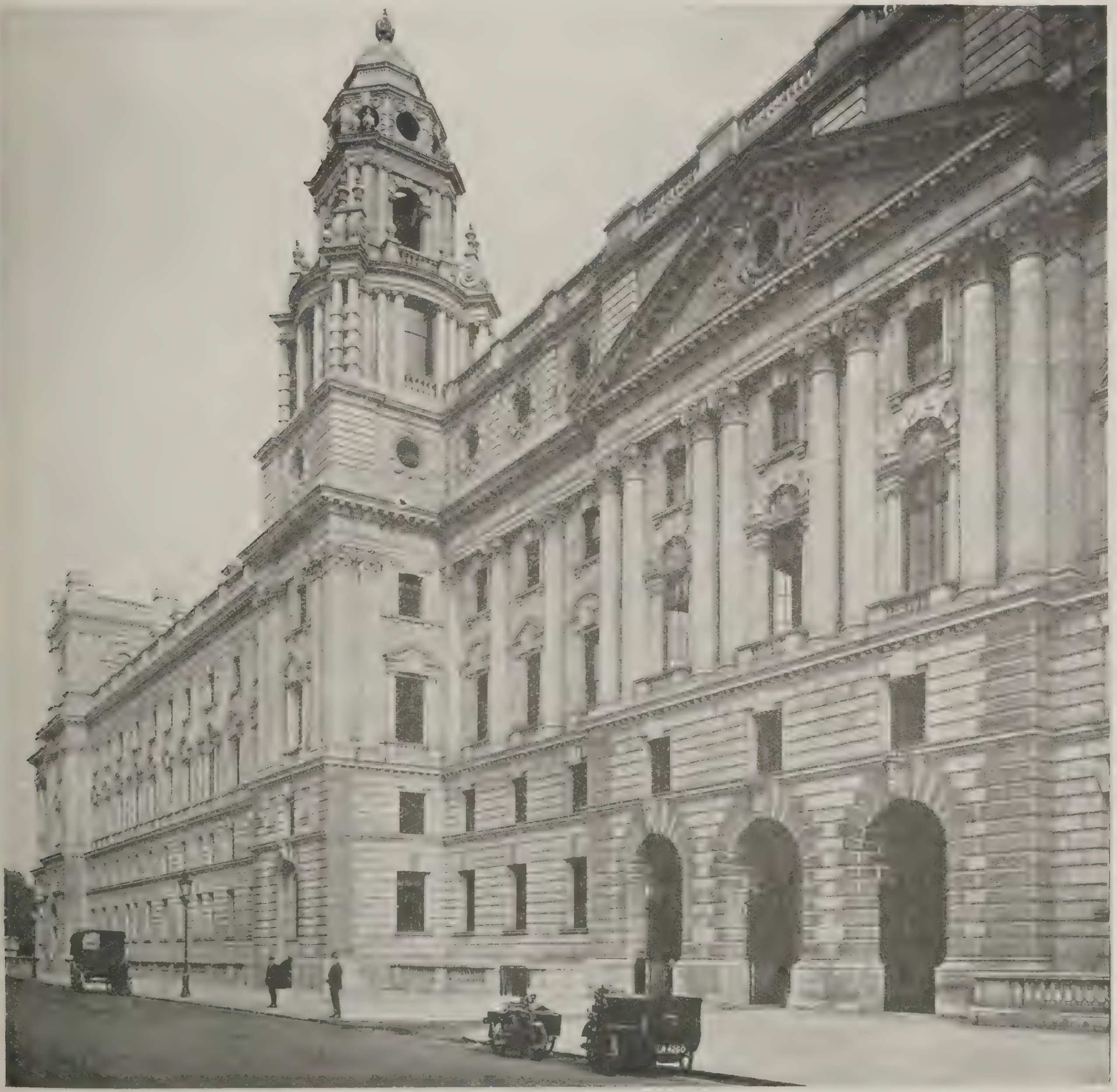


Photo: John H. Avery & Co.

COMPLETION OF THE NEW GOVERNMENT BUILDINGS, WESTMINSTER: ELEVATION TO GREAT GEORGE STREET.

(DESIGNED BY THE LATE JOHN M. BRYDON, F.R.I.B.A., AND COMPLETED BY SIR HENRY TANNER, I.S.O., F.R.I.B.A.)

NEW PREMISES OF THE COMPTOIR NATIONAL D'ESCOMPTE DE PARIS

IN the design of this building the architects were confronted by a problem of more than ordinary perplexity. The site, as will be seen from the accompanying plan, is of very irregular formation—at one point the adjoining property is only 4 ft. from the main front. The architects, however, have overcome all difficulties in a masterly manner, producing an effect of normal regularity.

The greater part of the frontage to King William Street, and the interior of the site on the ground floor and under, is allocated to the bank, while the two corner sites by Abchurch Lane and Nicholas Lane provide admirable positions for smaller companies; the first floor and over are given up to offices for letting.

The planning of the banking premises has received chief consideration, the architects' endeavour having been to embody the particular requirements that were laid down by the directors. The large banking hall is placed centrally on the site, with the main entrance in the centre of the King William Street frontage.

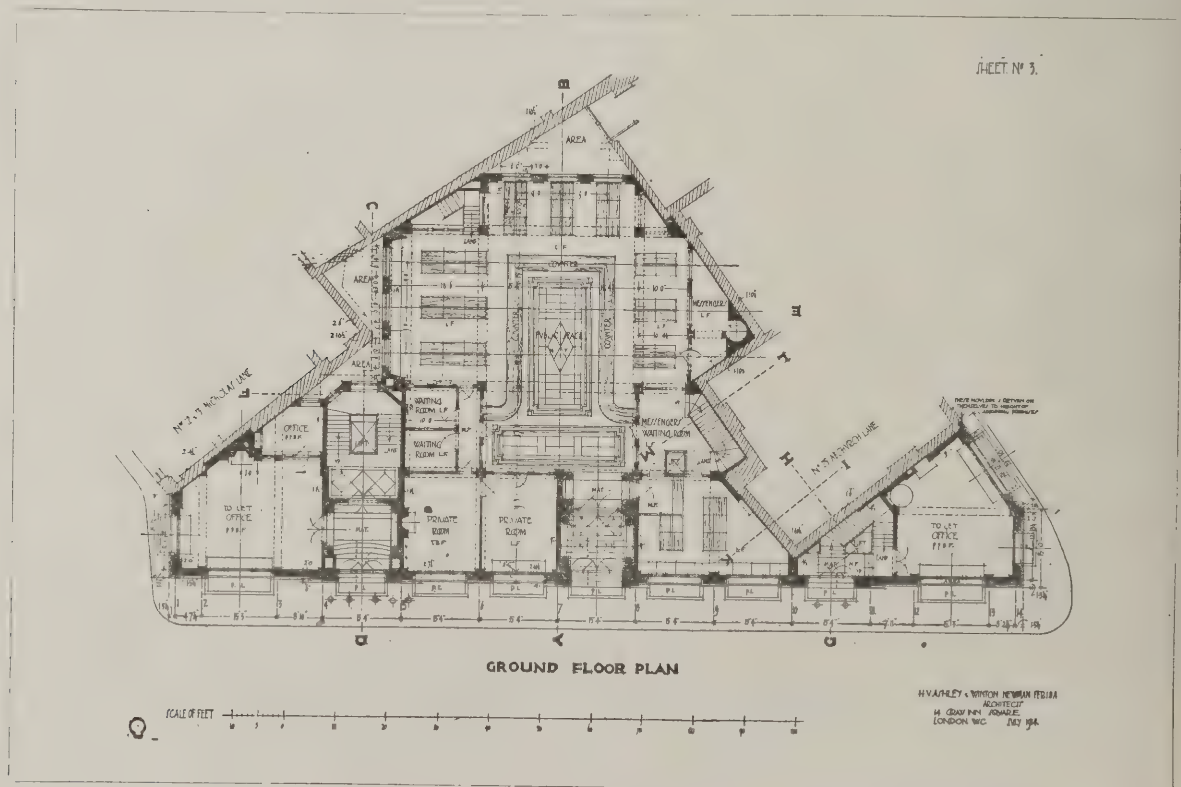
The building is a steel-framed structure, fire-resisting throughout. The frontages to the streets are faced with Portland stone with a granite base, and the open courts in the interior of the site are faced with white glazed bricks. Internally the upper floors are very simply treated; but the banking hall and managers' room are finished with marble and decorative plaster ceilings.

One interesting feature of the work is the provision that has been made for the use of gas for heating purposes. The building has been carcassed throughout with a gas supply, points running to every fireplace, so that when each room comes to be occupied the installation of gas heating stoves will be accomplished with a minimum of trouble and expense to tenants. The gas arrangements are such that any sub-division of the floors can have a separate supply for heating if required.

All the necessary conveniences of a moder banking institution have been installed—heating mechanical ventilation (inlet and extract), telephones, autophones, synchronised clocks, vacuum cleaners, mechanical carriers, and many devices fo the watchman and for the strong-room departments, all the latter being separately and ingeniously ventilated.

The building being for one of the premier banking institutions of France, the intention of the architects was to impart some French feeling to th architecture, and yet to maintain dignity and restraint. In this they have succeeded admirably The strong lines and simple character of the tw end portions act as an excellent foil to the centr portion, with its vertical lines and bay windows.

The general contractors for the building wer Messrs. Higgs and Hill, Ltd., who were also responsible for the whole of the stonework, joinery, bank fittings, and plumbing, all this work having been prepared at Crown Works, Lambeth. Granite fo the exterior, flooring mosaic, and various kind of marble for interior decoration, were supplied by Messrs. H. T. Jenkins and Son, of Torquay. Floors were executed by Messrs. Stuart's Granolithic Co. Ltd., of London. The gas-fitting work was executed by Messrs. The Gas Light and Coke Company, of Westminster. Strong-room doors, etc. were supplied by Messrs. Hobbs, Hart and Co. Ltd., of London. Lifts and cranes were supplied by Messrs. Waygood-Otis, Ltd., of London. Staircases were supplied by Messrs. Haywards, Ltd., o London. Tiles were supplied by Messrs. Carter and Co., Ltd., of London, and slates by Messrs. The Old Delabole Slate Company, of Cornwall. Metal casements and fittings were supplied by Messrs. The Crittall Manufacturing Company, Ltd. of Braintree and London. The consulting engineers were Messrs. Whitaker Hall and Owen, and Mr. Theodore Stevens was the electrical engineer.



NEW PREMISES OF THE COMPTOIR NATIONAL D'ESCOMPTE DE PARIS, KING WILLIAM STREET, LONDON.
H. V. ASHLEY AND WINTON NEWMAN, FF.R.I.B.A., ARCHITECTS.

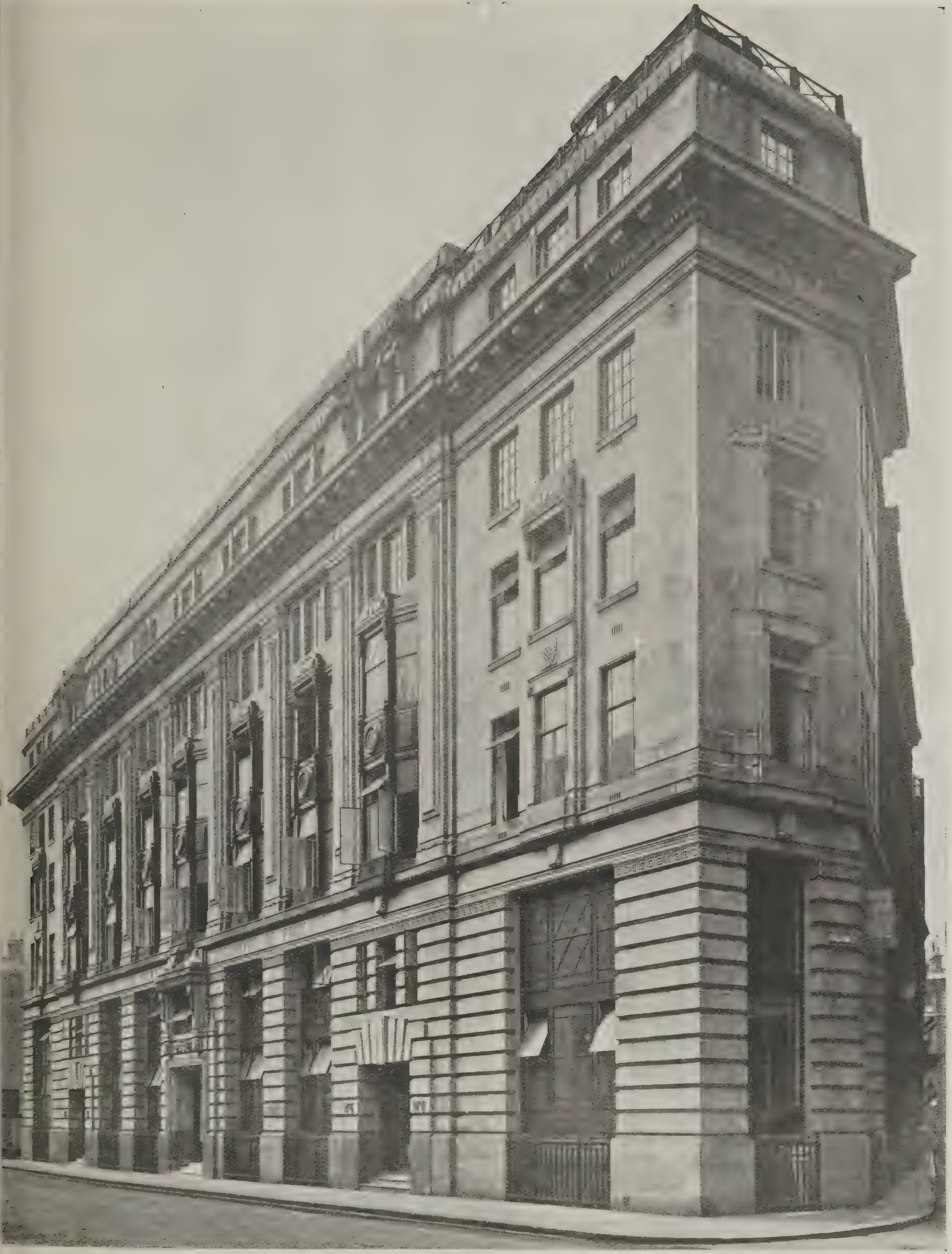


Photo: Bedford Lemere.

NEW PREMISES OF THE COMPTOIR NATIONAL D'ESCOMPTE DE PARIS, KING WILLIAM STREET, LONDON.

H. V. ASHLEY AND WINTON NEWMAN, FF.R.I.B.A., ARCHITECTS.

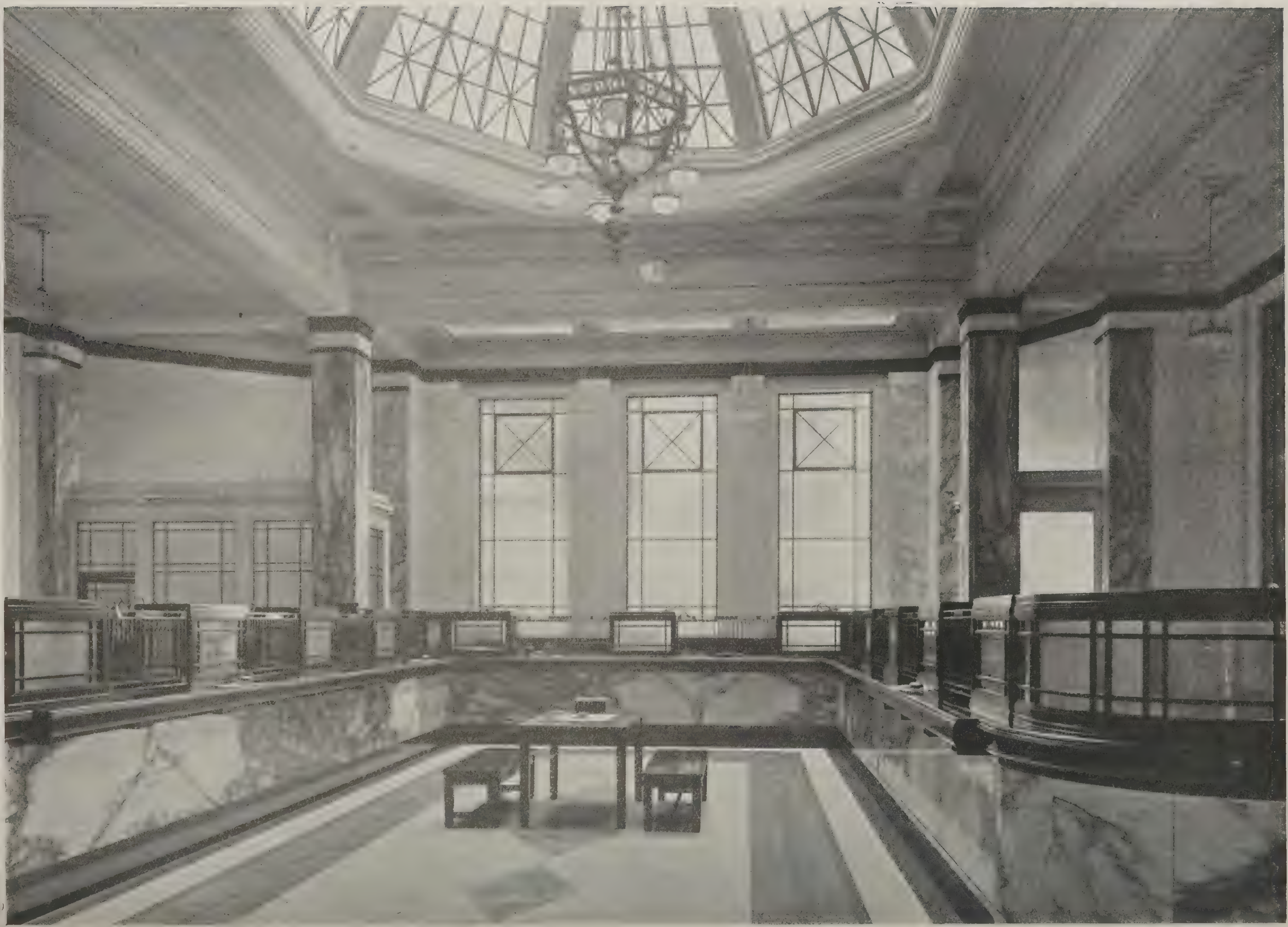


Photo: Bedford Lemere.

NEW PREMISES OF THE COMPTOIR NATIONAL D'ESCOMPTE DE PARIS, KING WILLIAM STREET, LONDON: THE BANKING HALL.

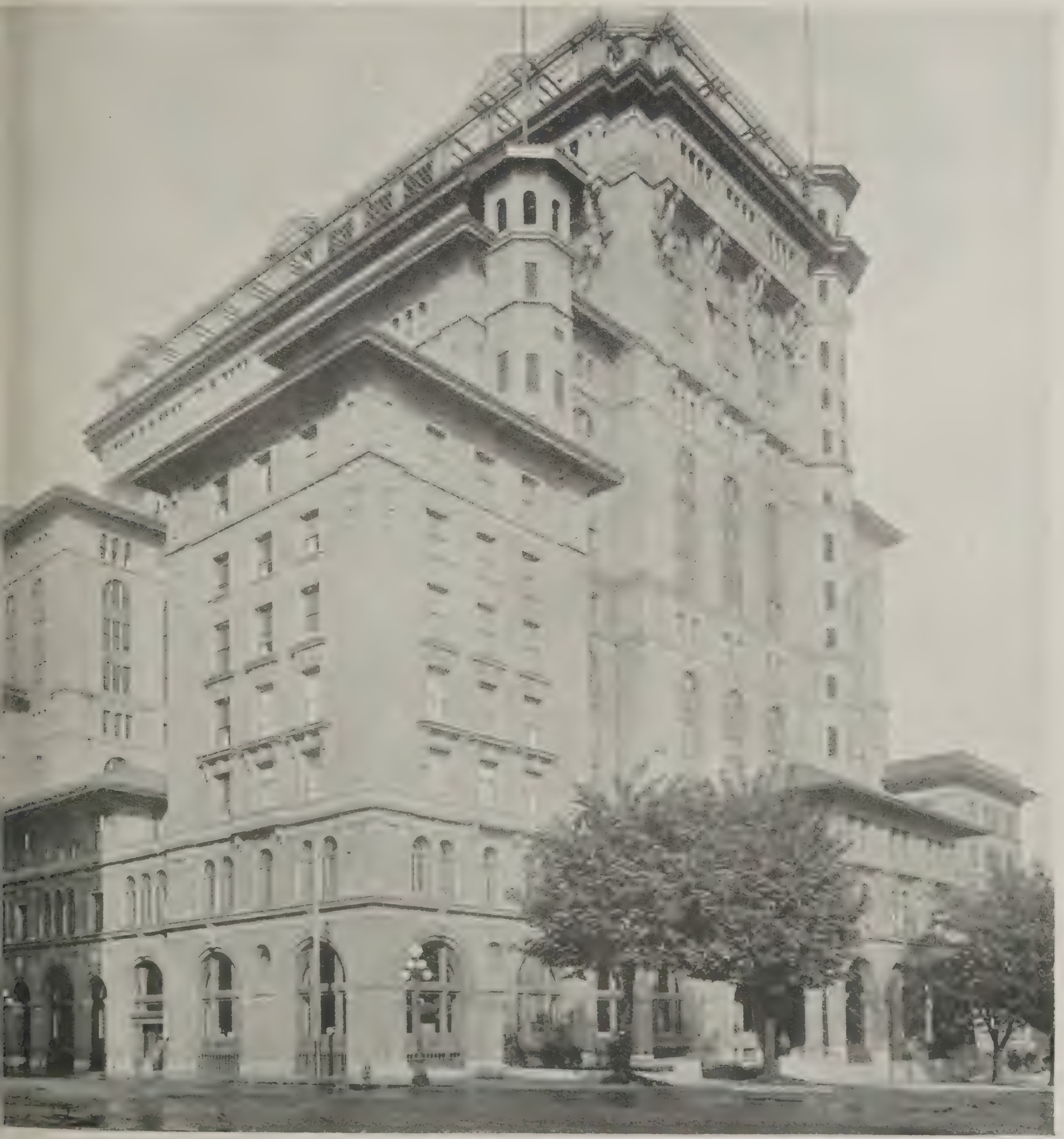
THE NEW C.P.R. HOTEL, VANCOUVER.

UT thirty years ago the Canadian Pacific Railway built the first hotel at the corner of Granville and Georgia Streets; a few years later ension was built on the adjoining property on ille Street. About ten years ago a "new" five- building was erected on the other property ing the original building at the corner of Georgia owe Streets. Six years ago the official architect Canadian Pacific Railway designed an exten- long Howe Street to the building at the corner. wed the same general architectural treatment, s built of fire-resisting reinforced concrete con- on. These two buildings were required to and be incorporated with the new buildings in a mme of operations which began in the early part and ended in July, 1916.

site is on sloping land at the top of a low hill, which forms the highest ground in the business section of the city. The available portions of the site measure 224 ft. on Granville Street and 216 ft. on Georgia Street.

The new building, by Mr. Francis S. Swales, possesses many fine apartments, among them being the ballroom, which is decorated with painted ornament in grey colour over a body colour of raw umber; its ceiling light is of white rippled glass with a border of stained glass in tones of amber and green. The spring dancing floor, of maple with oak and marble borders, is 66 ft. by 96 ft.

The hotel contains 600 bedrooms and 450 bathrooms. The reinforced concrete work was carried out on the Kahn system. The terra-cotta was supplied by Messrs. Doulton and Co., Ltd., of the Royal Doulton Potteries, London, England.



THE NEW C.P.R. HOTEL, VANCOUVER. FRANCIS S. SWALES, ARCHITECT.

THE NEW PREMISES OF MESSRS. HEAL & SON, LTD.

IN this fine new building in the Tottenham Court Road, a noteworthy attempt has been made to solve the perennial shop-front problem—with very considerable success. The necessities of modern commerce have not been brushed aside, nor has an architectural scheme entirely out of relation to the requirements been superimposed. The elevation is carried out generally in Hopton Wood stone.

The general contractor was Mr. F. G. Minter, of Ferry Works, Putney, who also executed all the joinery and the plumbing and sanitary work. T "Sprinkler" installation was carried ou Messrs. Mather and Platt, Ltd., of Manch Iron windows were supplied by Messrs. The C Manufacturing Co., Ltd., of Braintree. Pav lights and collapsible gates were supplie Messrs. Haywards, Ltd., of London. The sulting engineers were Messrs. Reade, Jac and Parry, and the architects were Messrs. Smit Brewer, FF.R.I.B.A.

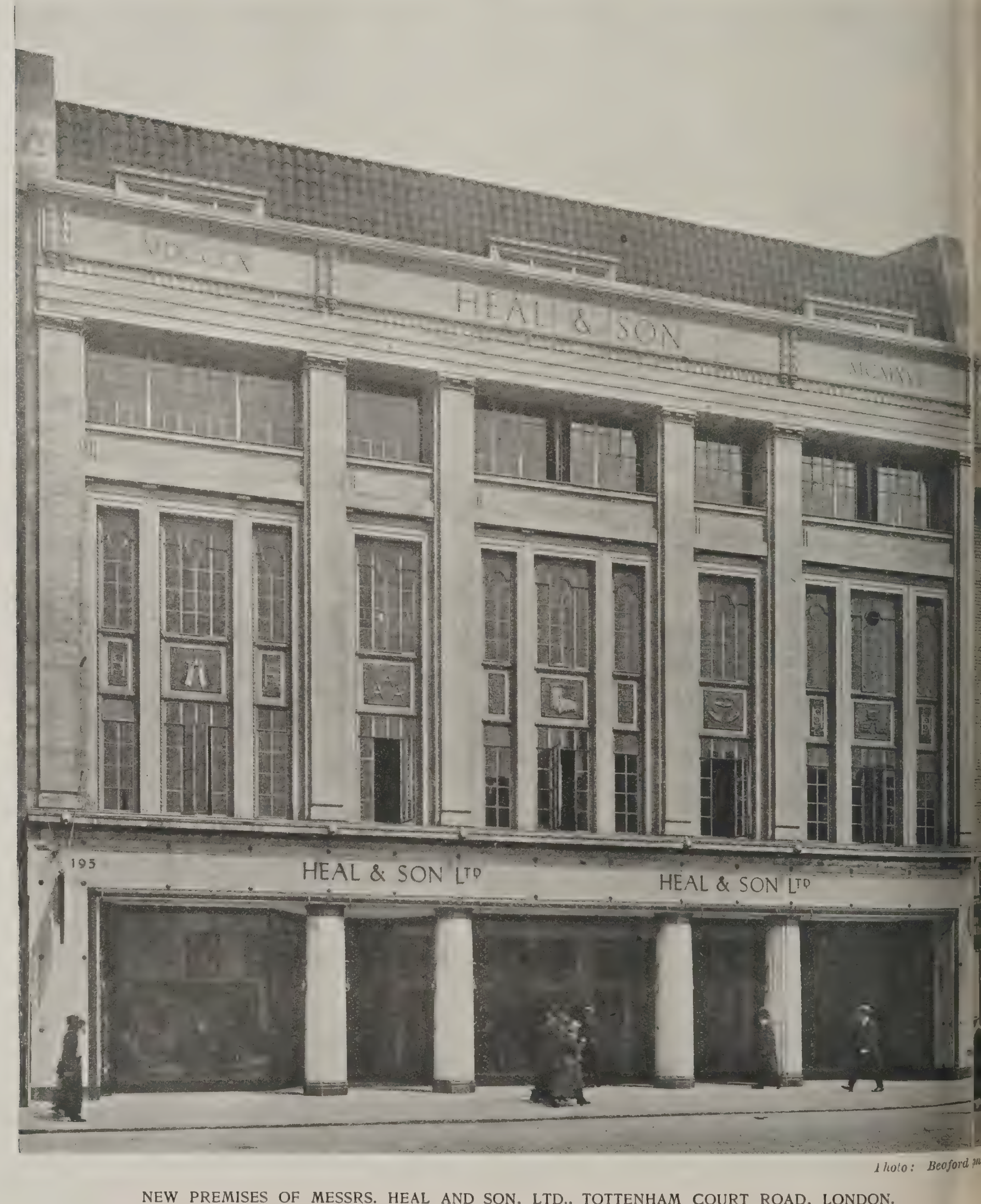


Photo: Bedford

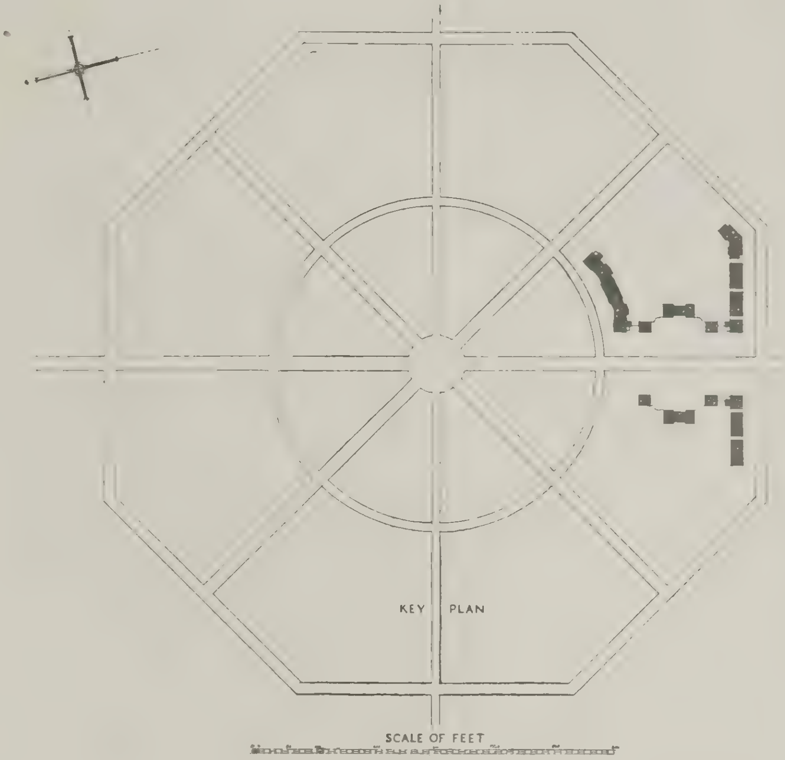
NEW PREMISES OF MESSRS. HEAL AND SON, LTD., TOTTENHAM COURT ROAD, LONDON.
SMITH AND BREWER, FF.R.I.B.A., ARCHITECTS.

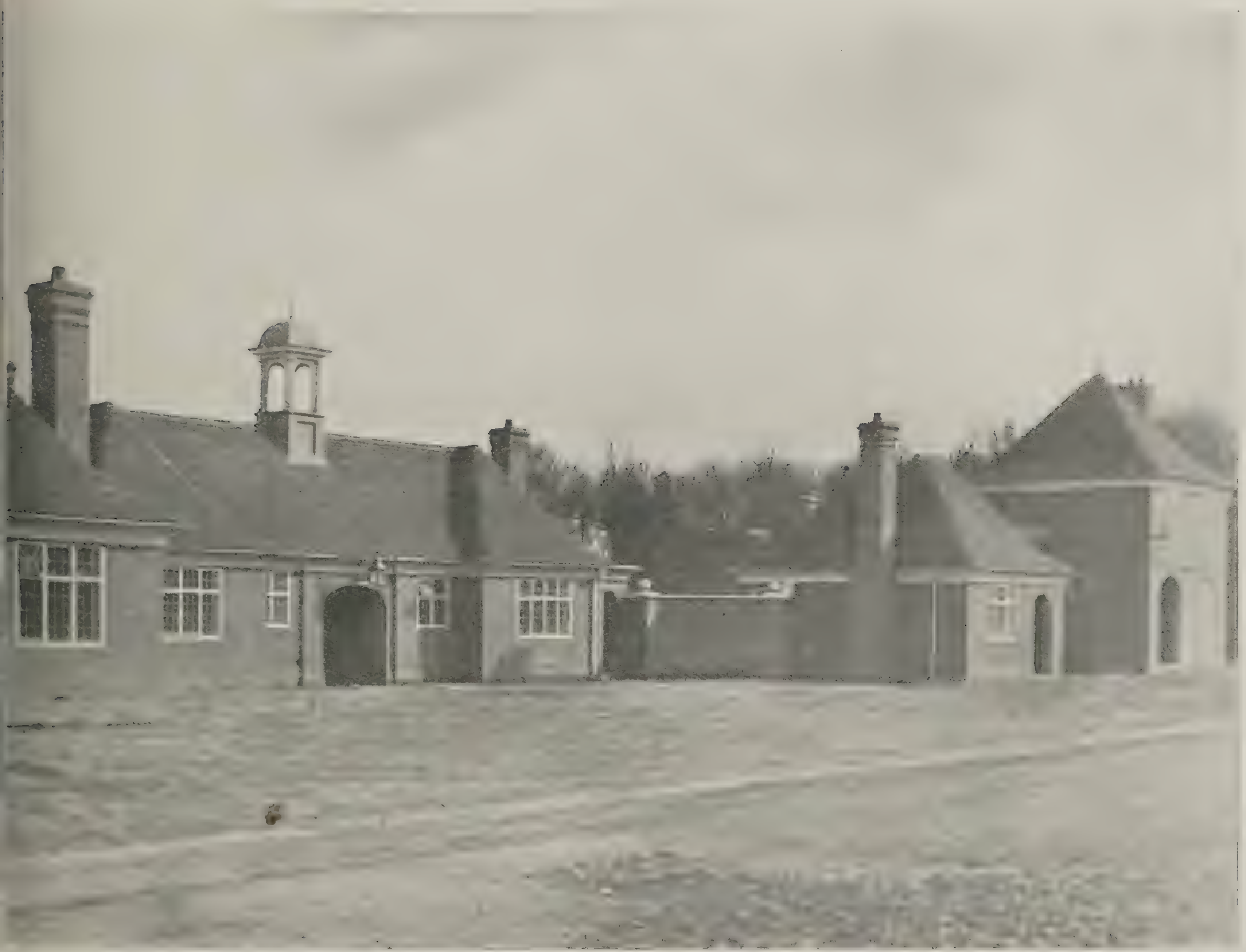
THE WHITELEY HOMES, BURHILL, WALTON-ON-THAMES.

E Whiteley Homes, Burhill, Walton-on-Thames, are being erected from the designs of several architects, one of whom Mervyn E. Macartney, F.R.I.B.A., whose n of the scheme, Section No. 5 of the gon, is shown by the accompanying illus- ns. This section, which will be found indi- on the block plan, is one of those having isadvantage of a steep fall in the ground west to east. Unfortunately this inequality levels necessitated considerable readjust- of the elevations after the buildings had designed, and the consequent modifications contingent rather than desirable. The in- g of the work of the various architects in ction of the Octagon has militated against work in an unexpected way, hardly ed in the original setting out.

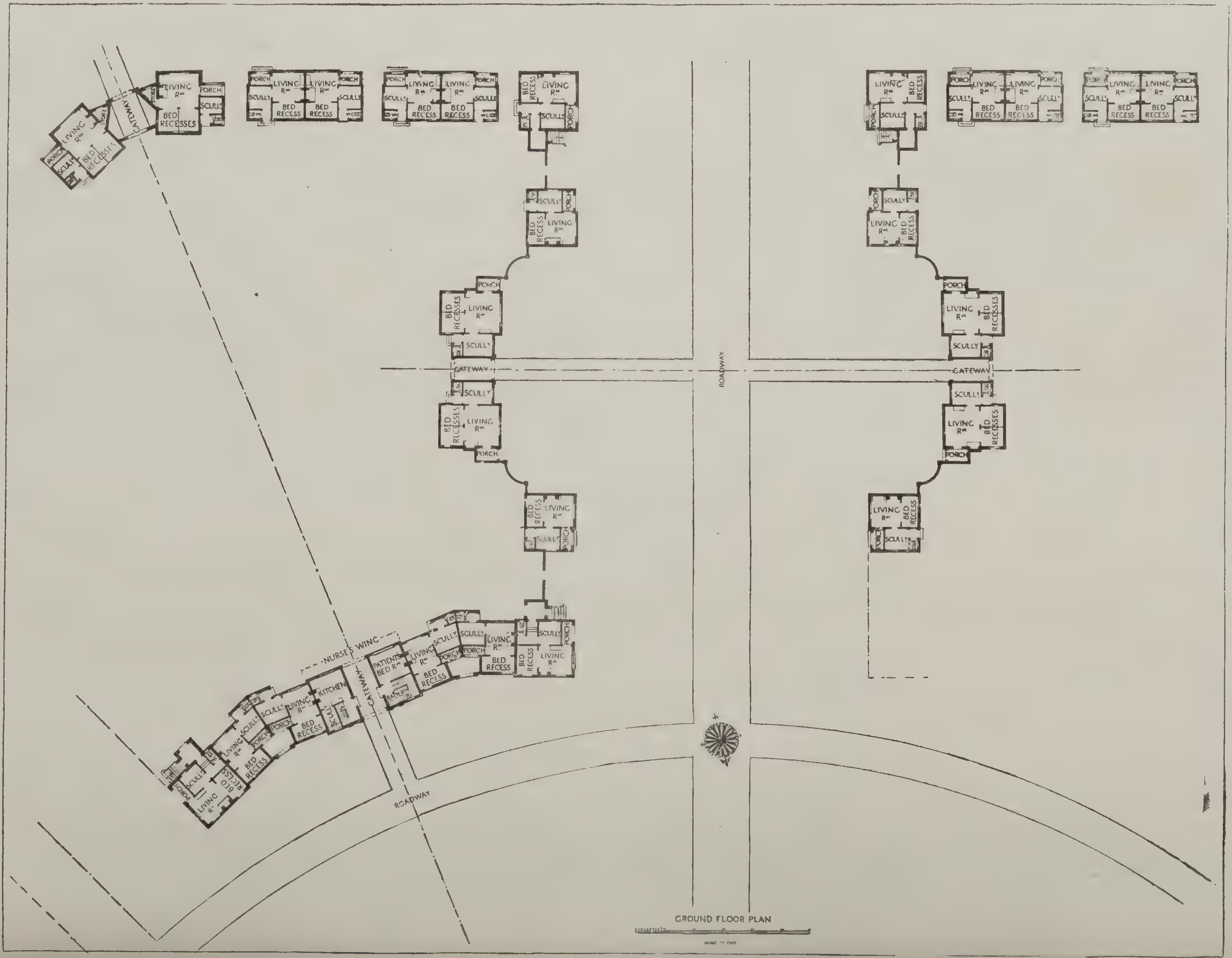
interesting to note that a diversity of s has been secured on a standardised and the practice is one which will in all bility be greatly developed as time goes

principal contractors were Messrs. H. n, Ltd., of Northampton, who, in spite r-time difficulties, have carried out the in a most satisfactory manner, so far as ection of the scheme is concerned. Mr. Comport was the resident clerk of works.

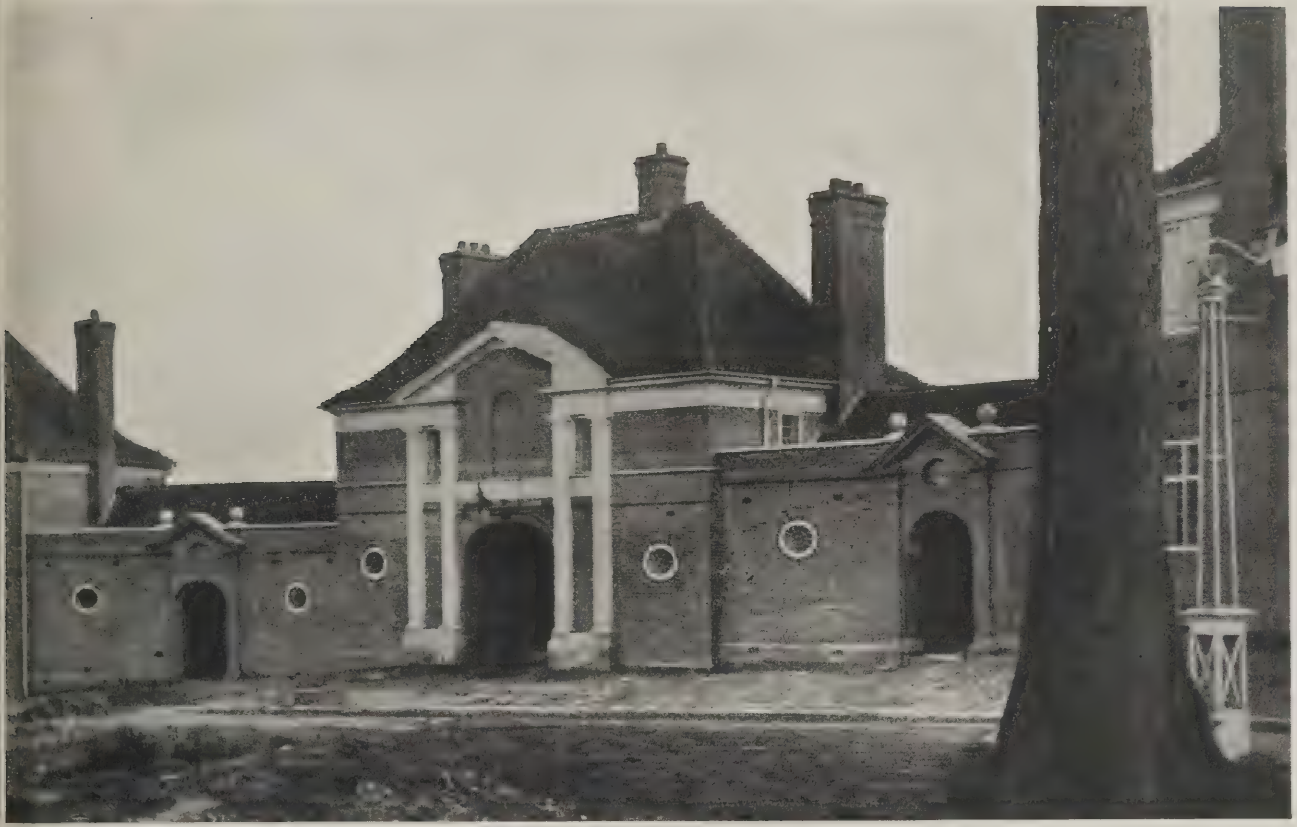


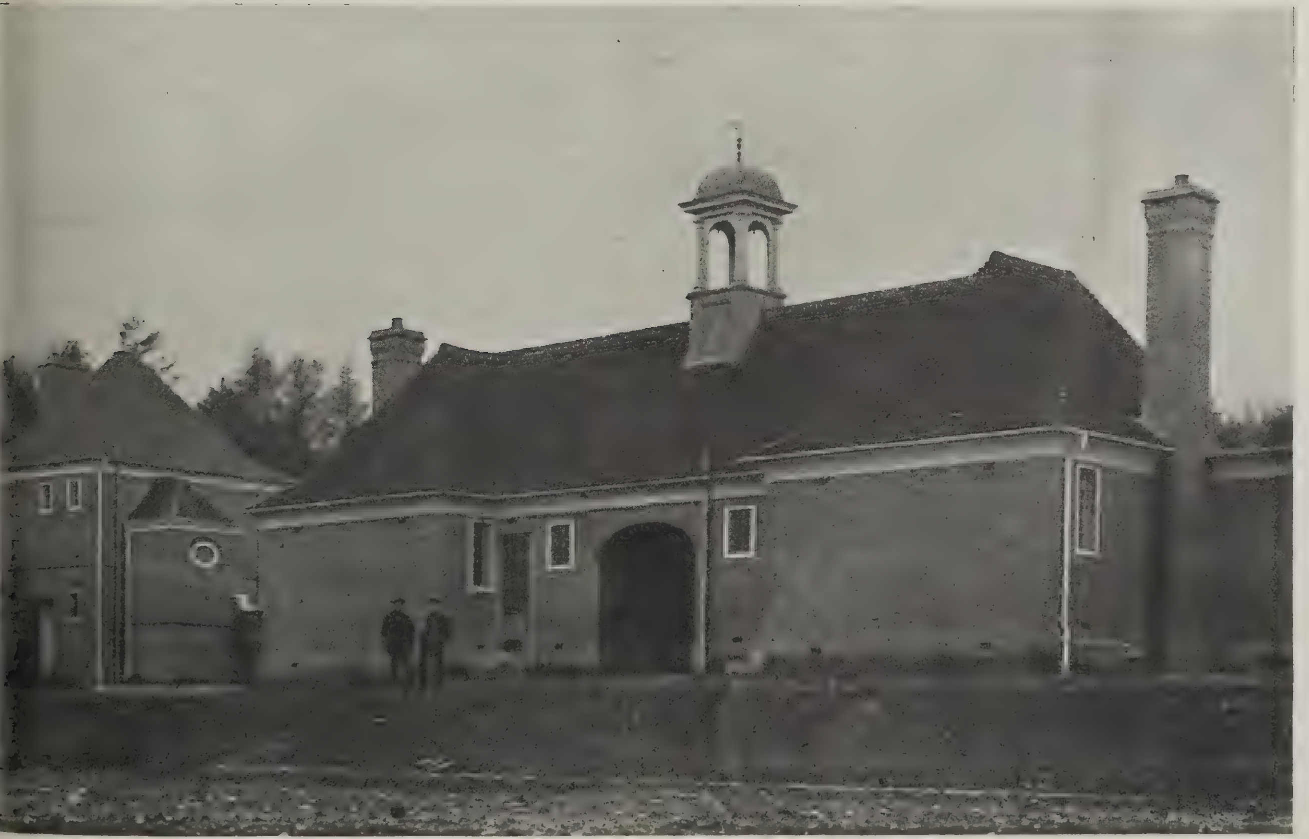


THE WHITELEY HOMES, BURHILL, WALTON-ON-THAMES. MERVYN C. MACARTNEY, B.A., F.R.I.B.A., ARCHITECT.



THE WHITELEY HOMES, BURHILL, WALTON-ON-THAMES: GROUND-FLOOR PLAN.





THE WHITELEY HOMES, BURHILL, WALTON-ON-THAMES: ELEVATIONS.

MERVYN E. MACARTNEY, B.A., F.R.I.B.A., ARCHITECT.

CHELSEA HOSPITAL FOR WOMEN.

THE front of this building faces west to Arthur Street, and is 250 ft. in length, consisting of a central block with wings on either side; the rear of the site is bounded by the Chelsea Infirmary; and on the south side is a plot of ground at present unoccupied, but upon which will be erected the nurses' home, with a garden laid out between it and the main hospital building.

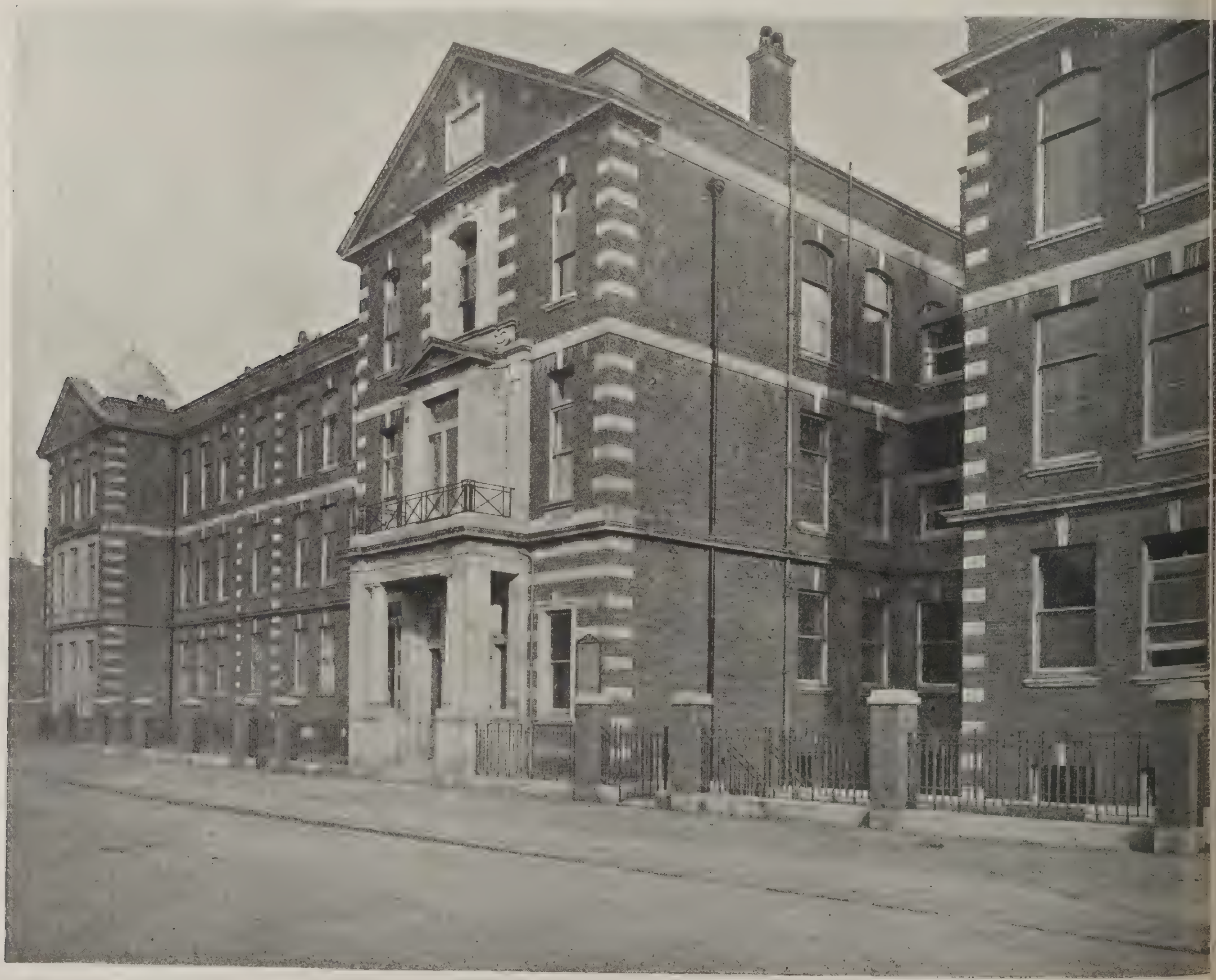
The constructional work generally is of reinforced concrete, including the bridges connecting the wings to the central block, with the exception of the very heavy beams under the ground floor, which, together with the stanchions supporting them, are of constructional steelwork. The floors are of reinforced concrete and tile construction, with a view to providing at minimum cost a sound floor with a flat soffit unbroken by beams. The success with which this has been done will be gathered when it is stated that the general thickness of the floors is only 9 in. on a clear span of 18 ft. The tiles were made of a porous material, so that fittings of all kinds could readily be screwed to the ceiling, both during the original construction and subsequently, without its being necessary to have recourse to plugging and disfiguring the ceiling, and, incidentally, the use of this material adds to the sound-resisting qualities of the floor. A reinforced concrete retaining wall, 15 ft. high, keeps back the earth from the area which nearly rounds the building, this wall being 9 in. thick the upper portion of its length, and 13 in. thick the lower portion. The foundations for this were carried down about 5 ft. below the area le so that access to the drains could readily be tained at any time without undermining the ret ing wall. The staircases also are constructe reinforced concrete, the landings being 4 in. thickness and the solid balustrade 3 in., all inter and external angles being rounded to facilitate removal of dust when cleaning. The whole of reinforcement consists of plain round mild st bars.

The whole of the sanitary work was carried by Messrs. Dent and Hellyer, Ltd.

Messrs. James Slater and Co. (Engineers), Lt of London, installed the cooking, heating, h water supply, and sterilising plant; also fire ma and hydrants.

The general contractors were Messrs. Foster a Dicksee, Ltd., of Rugby and London. Flush do were supplied by Messrs. John P. White and Sor electric lift by Messrs. Smith, Major, and Stever electric clocks by The Synchronome Co.; and st treads by Messrs. Stuart's Granolithic Co., Ltd.

The total cost of the hospital, as at prese erected, is stated to have been about £50,000.



CHELSEA HOSPITAL FOR WOMEN.

YOUNG AND HALL, F. AND A.R.I.B.A., ARCHITECTS.

MODERN SCIENTIFIC ILLUMINATION.

I.—ELECTRICITY.

E design of buildings is in many re-
spects determined by the admission of
ght. This is the chief factor in decid-
ne size and shape of the most modern
ls and factories; but in any interior
rchitectural distinction the natural
ng will likewise receive close atten-
rom the architect, for the appearance
e room by day depends very greatly
e way the lights are arranged.

the other hand, artificial lighting,
ally speaking, does not seem to re-
the attention which it deserves from
architect. When the expenditure
ed to the various features in a build-
s apportioned, the artificial lighting is
o be left to the last. This is not as it
d be. Illumination is a necessity and
luxury; for example, it is vital to the
er use of schools and libraries, and in
ries it has an important influence on
h, freedom from accidents, and
ty and output of work. The appear-
of a noble interior may be quite
ed by the use of unsuitable and un-
ly fittings. In these days the appear-
of a room by artificial light is quite as
rtant as by day; in many cases more
Some buildings—theatres and picture
es, for example—are used almost ex-
vely by artificial light.

ring the last decade illuminating
neering—the art of applying light for
oses of illumination—has made immense strides. The subject is now too complex to be studied in complete detail by the architect, whose attention is necessarily spread over a great variety of matters. There have been marked improvements in lamps and fittings, and a corresponding advance in our knowledge of how to use them. We can now manipulate the distribution of light in many different ways. By the aid of illumination-photometers lighting effects can be studied numerically, so that to-day it is possible to predict very closely the illumination resulting from a given arrangement of lamps in specified fittings, and afterwards to check these results by actual measurement. At the same time illumination has been studied very closely in relation to the eye. It is necessary not merely to provide a sufficiency of light for any purpose, but to ensure that the eye is not offended by glaring, unshaded sources of light, falling within the direct range of vision, nor by violent contrasts or inconvenient shadows. If sources of high intrinsic brilliancy are used they should be high up and quite out of the field of view, softened or concealed from the eye by appropriate globes, shades, or reflectors.

Improvements in shades and reflectors have had a very marked influence on illumination. To-day the lamp, with its appropriate reflector, globe-bowl, or other appliance, is considered as one unit. From the illuminating engineering standpoint a well-designed shade or reflector is expected to fulfil one or more of the following requirements:

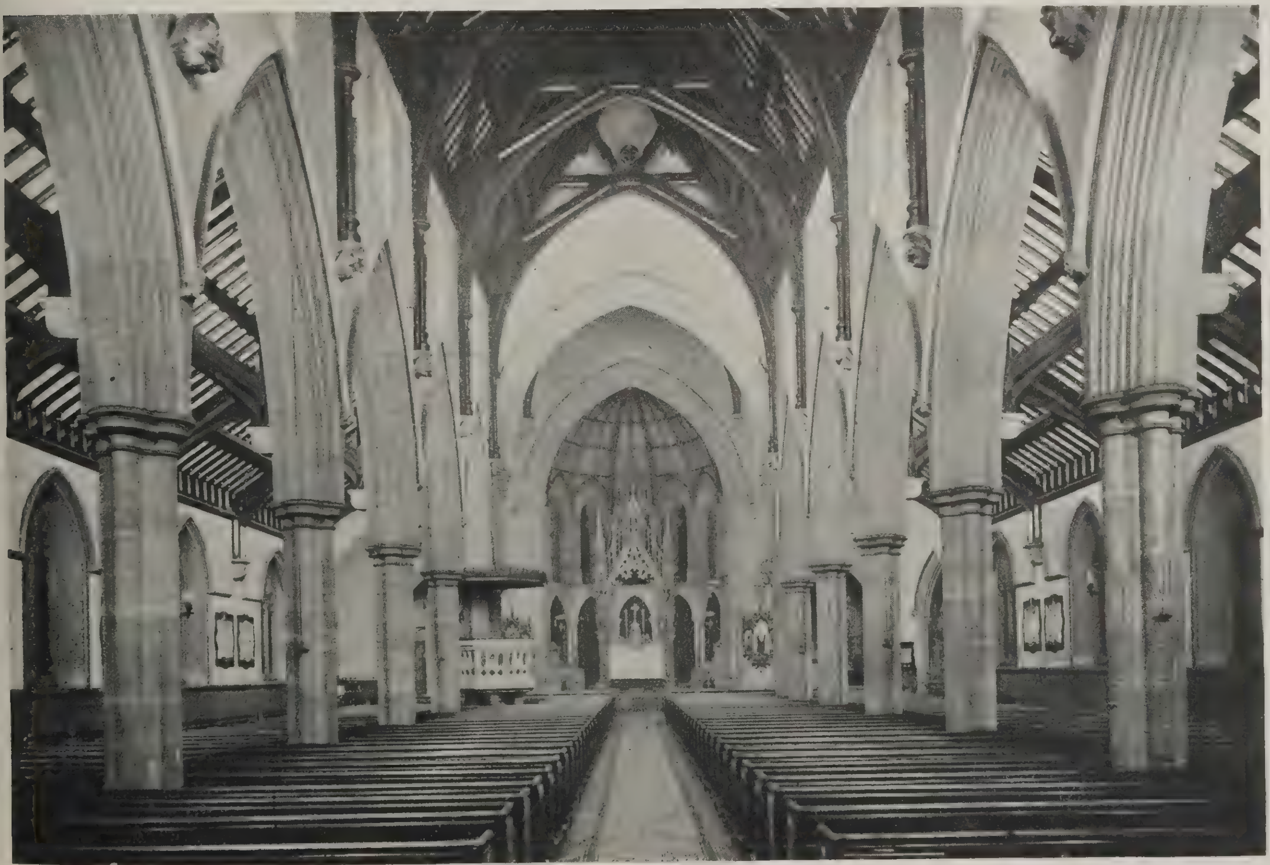
(1) It should conceal or soften the light so as to avoid glare.

(2) It should be so designed as to distribute the light where it is mainly needed (in general, on the tables and in the lower region of a room).

(3) It should form a diffusing surface, spreading the light over a more extensive area, and thus softening the shadow.

(4) It should be itself a pleasing and decorative object.

These four requirements will naturally vary in relative importance according to the nature of the problem. In lighting a factory (1) and (2), and, in some cases (3), are of paramount importance. In a decorative interior (4) must also receive attention, and is not necessarily incompatible with the others. One still sees in use shades in conflict with all these requirements—for example, reflectors too shallow to cover the light or materially influence the direction of its rays: one even observes shades of clear or tinted glass which merely absorb light, do not alter the distribution, and leave the inconveniently bright filament fully exposed to view. Such shades are not only inefficient, but prejudicial to eyesight. The brightness of the ordinary metallic filament was already so high as to



Illuminated by Concealed Trough Reflectors.

FIG. 1.—ST. ANNE'S CHURCH, EDGEHILL, LIVERPOOL.

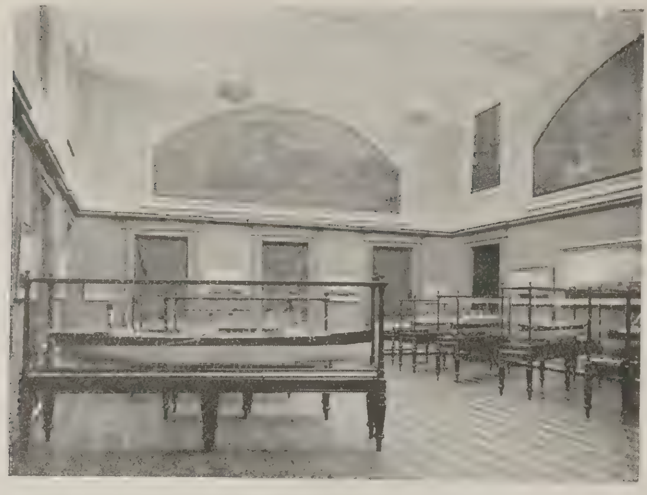


Fig. 2.—The Model Room. Indirect Principle.

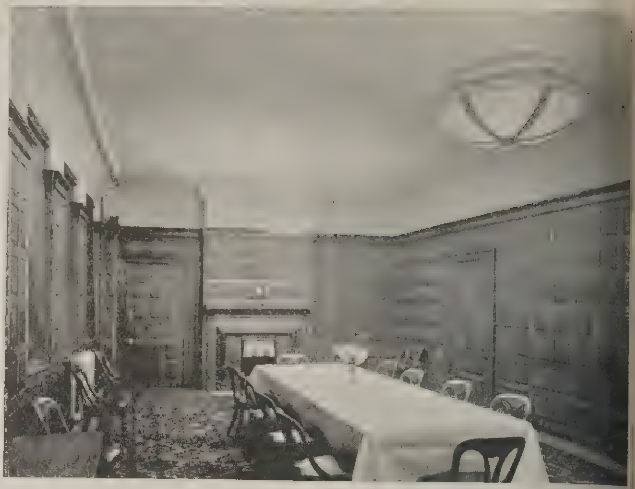


Fig. 3.—The Dining Room. Semi-Indirect Principle.

PREMISES OF SIR W. G. ARMSTRONG, WHITWORTH AND CO., LTD.—WALKER SHIPYARD.
CACKETT AND BURNS-DICK, ARCHITECTS.

make proper methods of shading highly desirable; in the case of the much brighter "half-watt" lamps it is absolutely essential to shade the direct rays. Moreover, the distribution of light from electric lamps (which may vary within wide limits according to the shape of the filament) is rarely suitable for practical lighting problems. One important object in using a shade or reflector or other lighting appliance is to redirect those rays of light which would otherwise merely escape and dazzle the eyes into directions where they can most usefully be employed.

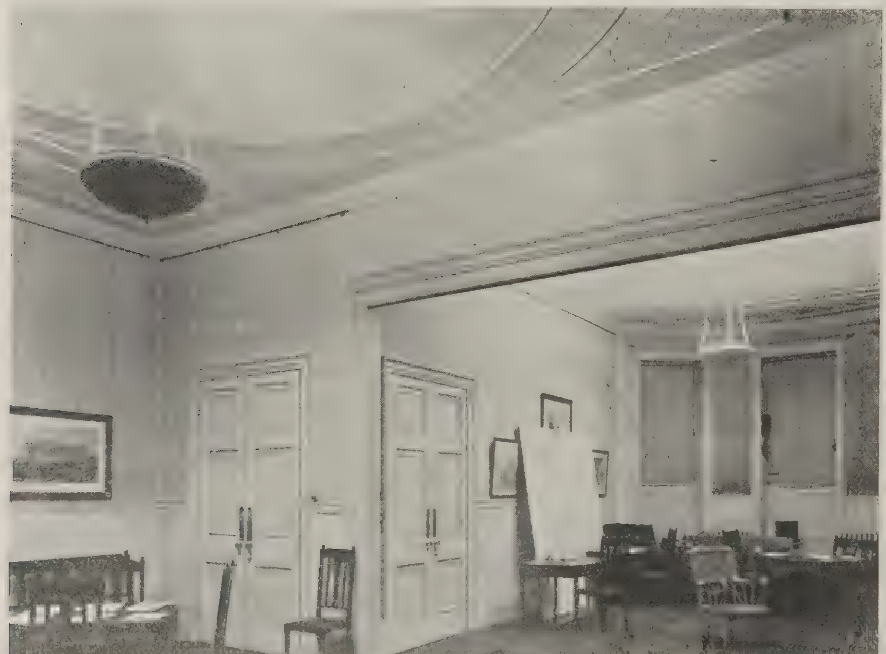
The walls and ceilings of a room may also be effectively used to promote the diffusion of light, and, speaking generally, it is a great advantage if these surfaces are relatively light in tint. The nature of an object can only be clearly perceived when it receives light from many different directions; the relatively small amount of reflected light available is one of the greatest difficulties in lighting streets and large open spaces.

In lighting an interior we may adopt either general lighting (i.e., flood the entire working area uniformly with light) or local lighting, in which appropriate units are allotted to certain spots where close work is done, or a combination of both methods. There is now a strong tendency in factories towards "overhead lighting" from units mounted direct on the ceiling or girders, especially with half-watt lamps. This leaves the room clear, keeps the lights out of the direct range of vision of operators, and makes it possible to alter the positions of machines, etc., without much interference with the illumination effects.

In these circumstances we employ direct lighting, i.e., lamps in open reflectors. The distribution of light from such units has been accurately determined, and di tions are given by modern firms concern with such appliances for the cor spacing to produce uniform illuminati It is possible to determine, with an ac- racy quite sufficient for practical purpos, the illumination to be produced on working plane by a given consumption electricity per square foot. For exam, with well-designed direct lighting w tungsten lamps, half a watt per square f gives approximately two foot-candles; w gas-filled ("half-watt") lamps the c sumption for a given illumination wou naturally be less. Experience also ables us to judge with fair accuracy conditions of illumination necessary various industrial processes, althou special cases will always arise which ha to be studied on their merits.

We have also a choice between dire semi-indirect, and indirect lighting. Wh direct lighting is mainly used (though exclusively) in factory lighting, there many opportunities for indirect and se indirect methods in offices, theatres, et and for domestic use. In indirect lighti the source of light is completely shield and its rays are reflected on to the ceili whence they are diffused throughout t room. The lamp is often mounted in bowl suspended from the ceiling, but it sometimes convenient to make use of c nices, etc., for the reflection of light. Th method has made considerable progre since the introduction of the half-wa lamp, and has several distinct advantag The complete shielding of the lamp favourable to elimination of glare; t diffusion of light from large surfaces giv soft shadows, causes the light to penetra into every corner, and avoids inconvenie reflections of light from the polished su faces of books, etc.

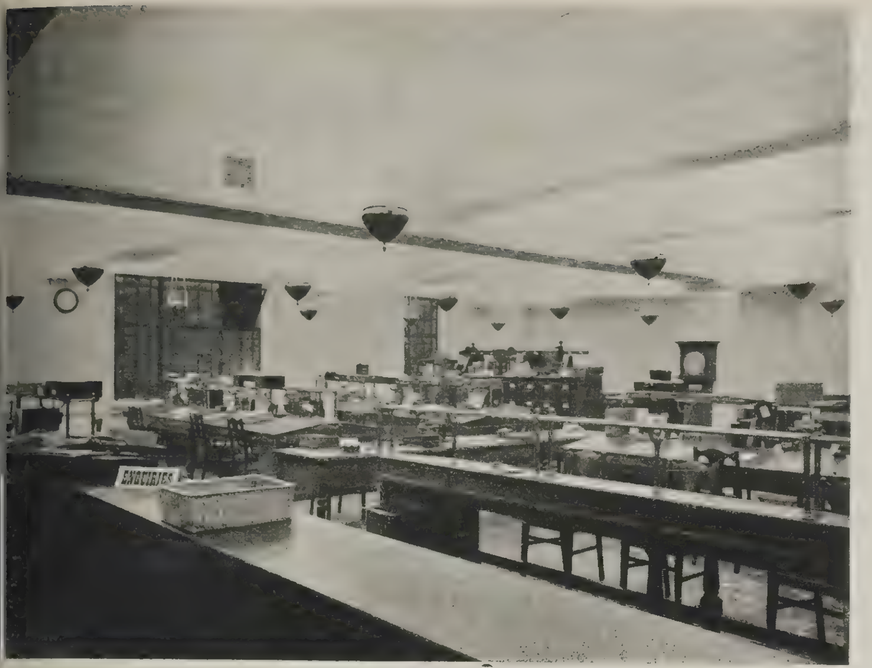
Architecturally, these methods have di tinct possibilities, but they must be sk fully applied. The impression of flatne and monotony sometimes arising from th form of lighting may be due to imperfe tions in design and application. In som cases it is desirable to relieve this impre sion by the use of bracket fittings or oth local lights, equipped with an appropria mildly luminous shade, which serve t "break up" any apparent monotony in th surroundings.



Illuminated on the Indirect Principle.

FIG. 4.—PREMISES OF THE SOCIETY OF ARCHITECTS, BEDFORD SQUARE, LONDON.

Indirect lighting involves, as a rule, somewhat higher expenditure of electricit



Illuminated on the Indirect Principle.

IG. 5.—PREMISES OF MESSRS. SEDGEWICK, COLLINS AND CO.: ENQUIRY OFFICES AND GENERAL OFFICE.

oduce a given illumination on the ng plane, but the fact of a much proportion of light being shed on alls is often an advantage for show- pictures, etc.

i-indirect lighting resembles indirect ig, except that the bowl is made of icent glass, so that some direct light eived. The design of these orna- l glass bowls affords exceptional unities for artistic treatment, and fect of the transmitted light is often useful in avoiding monotony of brightness, where there is a danger of this impression being produced.

The possibilities of decorative lighting in halls and other large interiors has not yet been fully developed. To get the finest results the design of the building and the lighting should be worked out together; it hardly offers a fair chance to the lighting expert if his assistance is only invited when the building is practically complete; in these circumstances it is often exceedingly difficult to get the desired unobtrusive effect and to make the lighting an integral feature of the general design.

As an additional instance of the combination of structural design with the study of lighting conditions, we may mention the lighting of underground passages on some of the tube railways by lamps concealed in slots in the upper wall. In a recent American installation the idea has been carried further by cutting sections in the walls and inserting lamps behind panes of diffusing glass. The lamps have special blue bulbs giving a colour of light closely resembling daylight, and the passage is thus made to appear as though it were above ground, and receiving natural light through windows in the ordinary way.

A somewhat complicated problem arises in the case of old churches and mansions and buildings of historic and antiquarian interest. Here, it is sometimes contended, one should aim at reproducing the original lighting conditions. One can appreciate this view, though, logically, it would involve adhering to the use of oil lamps and candles. But, as a matter of fact, the tendency is for electricity to be used more and more for such buildings; and if a certain sacrifice of artistic fitness to modern convenience is made, one should at least take pains to make the new illuminant unobtrusive, and, so far as possible, harmonious with the general scheme. One may conform to a distinctive style of fitting and yet not offend against the fundamental principles. Yet one often finds that electric lamps are introduced without any regard to artistic considerations; those responsible seem to have despaired of avoiding incongruity, and to have allowed the contractor to install lights and fittings which are a positive eyesore.

In all such cases much might be done by the co-operation of the architect and the lighting engineer. Many electrical firms

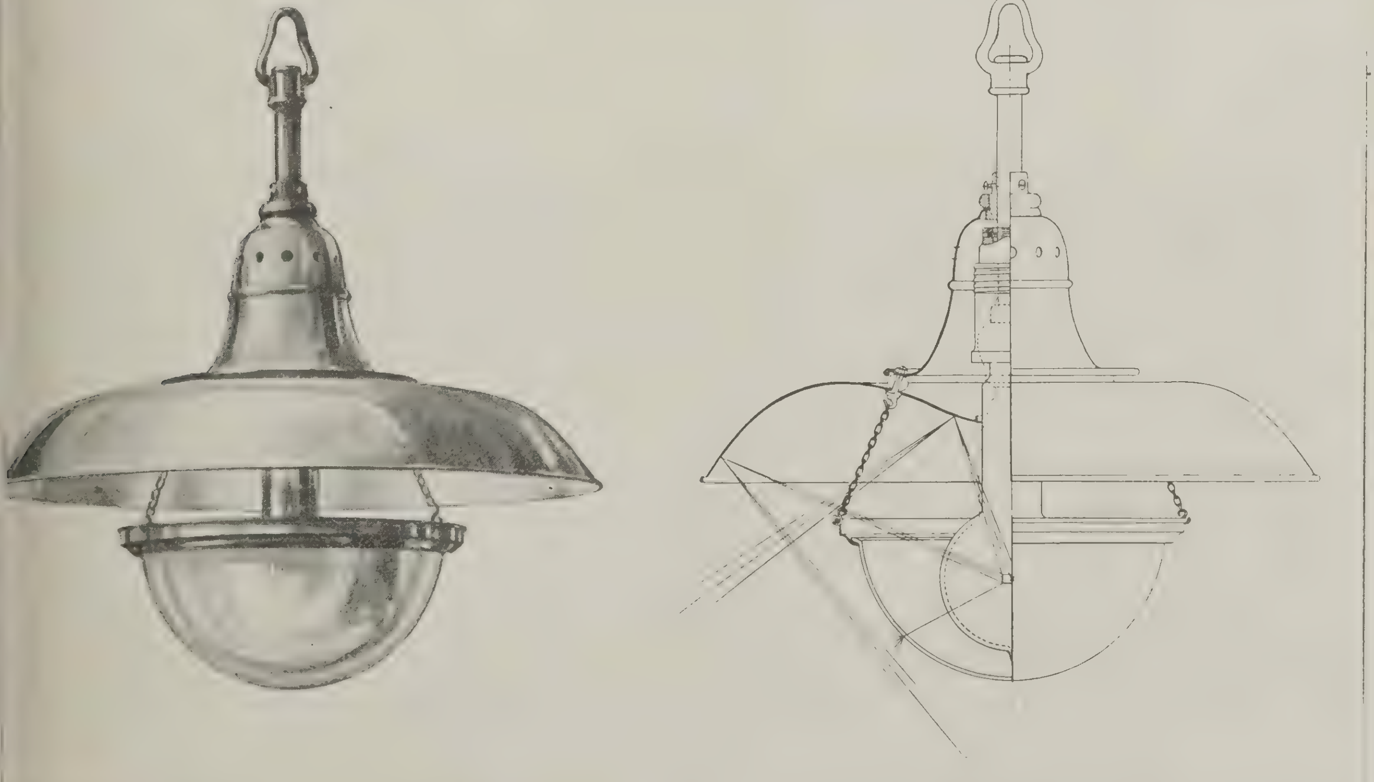


FIG. 6.—MODERN SEMI-INDIRECT FITTING FOR INDUSTRIAL LIGHTING PURPOSES.

have an illuminating engineering department able to advise and prepare lighting schemes; and there are also now arising independent specialists in lighting, who, in the case of important buildings, could help the architect by acting as an intermediary with the firm supplying the lighting appliances. There is no reflection on the architect in thus seeking expert help. Already he invites the assistance of experts on heating and ventilation, and it is unreasonable to expect him to be familiar with the constantly changing developments in lighting in the same way as one who has made illumination his special province. In taking advice on this subject he is only following the precedent of the general medical practitioner who consults a specialist in complicated cases.

A notable instance of such co-operation was afforded by the design of the Carnegie libraries in New York about ten years ago, when plans were worked out by the architects and the consulting illuminating engineer conjointly, and with very beneficial results. Another instance of such co-operation was the remarkable Soldiers' Memorial Building at Pittsburg. There is ample room for co-operation in regard to external lighting, both of streets and the outsides of buildings. Skill and forethought might make our streets more pleasing by night than by day. This is one of the many problems in lighting which in general cannot be very actively dealt with at the present moment, but will deserve attention when we return once more to normal conditions, and even at present when new installations are undertaken or plans are being prepared for future action on a large scale.

Concerning the illustrations which accompany this article, the following notes may be added: Figs. 1, 2, 3, 4, and 5, reproduced from untouched photographs taken by artificial light, are shown by courtesy of the British Thomson-Houston Co., Ltd. Fig. 1 shows the interior of St. Anne's Church, Edgehill, Liverpool, illuminated by concealed B.T.H. trough reflectors. The advantage of this device in a case where exposed suspended fittings are not desired is obvious, while the illumination provided fulfils all requirements—practical and æsthetic.

Figs. 2 and 3 show rooms on the premises of Sir W. G. Armstrong, Whitworth and Co., Walker Shipyard. In the one instance, the system is indirect and in the other semi-indirect, the fittings in the latter case being equipped with luminous bowls. Both installations are of the "Eye-Rest" type, and the mellow, though thoroughly effective, illumination secured is well shown.

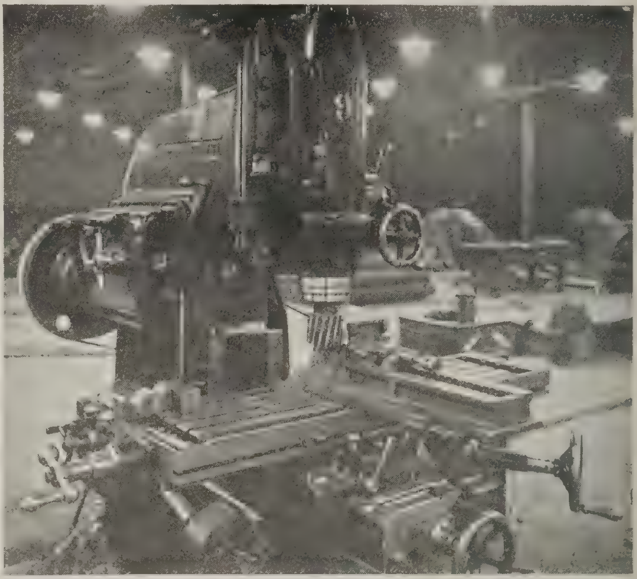


FIG. 7 —VIEW OF MILLING MACHINE BY SEMI-INDIRECT LIGHTING.

Fig. 4 is an example that will be of more than ordinary interest to architects—the premises of the Society of Architects in Bedford Square. Here again the system employed is the "Eye-Rest," and the even character of the illumination will be noted, together with the distinctness with which the pictures are shown up on the walls.

Fig. 5 shows an office interior lighted by "Eye-Rest" indirect fittings. The excellence of the light on the working surface will be observed.

Fig. 6 shows the G.E.C. semi-indir
ting which has been specially desi
for industrial lighting purposes, and
use to-day in hundreds of machine
throughout the country. It is fitted
Osram "Atmos" type lamps.

The diagram shows the method of
distribution, together with the diff
arrangement.

Fig. 7 is a reproduction from a
touched photograph of a milling ma
taken by night and by the illumin
provided by the system itself.
machine shown is one of many install
this shop, the area of which is 3
sq. ft.

Figs. 8 and 9 are general views o
shop by daylight and by artificial l
An excellent idea is given of the r
obtainable by the G.E.C. system of s
tific general lighting.

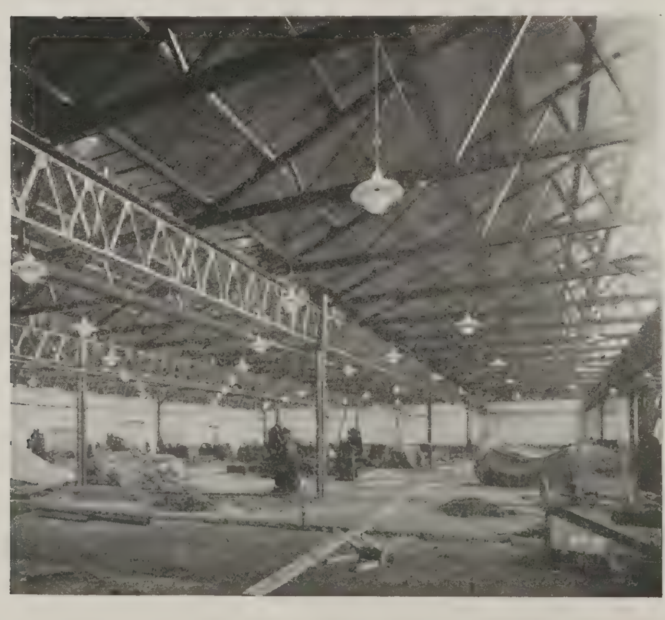


Fig. 8.—View by daylight, showing installation of Semi-Indirect Industrial Lighting Fittings.

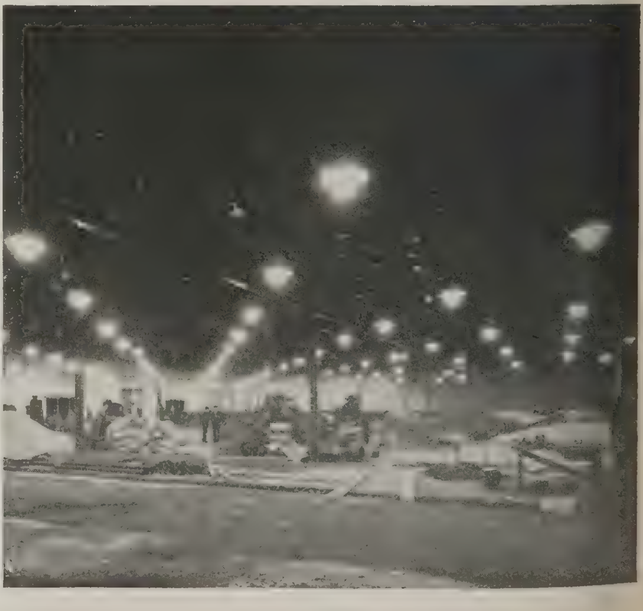


Fig. 9.—View taken by Artificial Light.

A MODERN MACHINE SHOP.

II.—GAS LIGHTING.

nong latter-day scientific achievements inating engineering occupies an im- ınt place. The immense extent to h mankind must depend upon artificial is sufficient explanation of the pro- that has been made both in its pro- on and utilisation. It is not too much y that many of the highly refined in- ial processes that are now carried out perfect precision would have been ally impossible under the older systems tificial lighting.

A Vast Field of Operations.

ere are many phases of the lighting ion. It involves, to mention a few nces out of a number, the illumina- of the office, the workshop, the ware- e, the library, the church, the public ughfare, and the home; but, while equirements of all these differ one another, they nevertheless have a in amount of influence upon each in so far as the good features of the of them accentuate the bad features e worst, and thereby create a contrast h is all the while calling for correc- For instance, better lighting in the quickly draws attention to poor ing in the street, office, shop, or train, so there is always a tendency towards ing the standard of illumination in an ırd direction.

these matters come within the pur- of the architect. Sometimes the pro- is purely economic, as with industrial ing, where the object is to provide the lighting at the lowest possible expense a view to increasing output and re- ıg manufacturing costs. At other the object is purely æsthetic, or only tely concerned with the question of But whether the object be utilitarian sthetic, whether the lighting installa- be chiefly for use or for decoration, in principles must be borne in mind if faction is to be ensured.

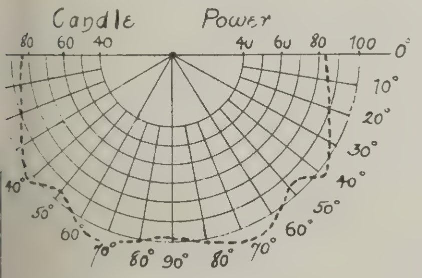


FIG. I.

Industrial Lighting.

Progress in the important matter of industrial lighting has received a great and valuable impetus from the recently issued report of the Home Office Departmental Committee, a document of very considerable value to all who are concerned with this aspect of artificial illumination.

The two guiding principles in industrial lighting should always be adequacy and suitability: that is to say, the degree of illumination should be sufficient for the needs, and it should be provided in such a way as to be inoffensive to the eye. It is remarkable that, whereas the first principle is not often lost sight of in practical work, the second is seldom given the attention it deserves; and it is perhaps in this matter more than in any other that reform is necessary. The size of the pupil aperture of the eye, that is its seeing power, depends upon the amount of light which enters it. If, therefore, an object is viewed under an unshaded or insufficiently shaded source of light, the eye receives rays from the object and also direct from the source. This latter, however, being so much more intense than the former, compels the pupil aperture to become so small as seriously to impair the visibility of the object. In such a case the illumination may be adequate but *not* suitable. The defect, moreover, does not end here. The rays which enter the eye direct from the source are wasted, inasmuch as they do not help the illumination of the object; and lighting on these lines is somewhat akin to the filling of a leaky bucket.

Fig. 1 shows in diagrammatic form the distribution of candle power from an inverted gas mantle in all directions between the horizontal and the vertical. In industrial work it is usually desired to illuminate horizontal surfaces such as objects on a floor or on a work bench, so that a predominance of rays downwards from the source is required. Compare Fig. 1 with Fig. 2. The same mantle is used in each case, but in Fig 2 the light is re-distributed by means of a shade. Note that the rays in the downward direction have been greatly increased, and in addition the rays within about 10 degrees from the horizontal have been eliminated, or rather redirected.

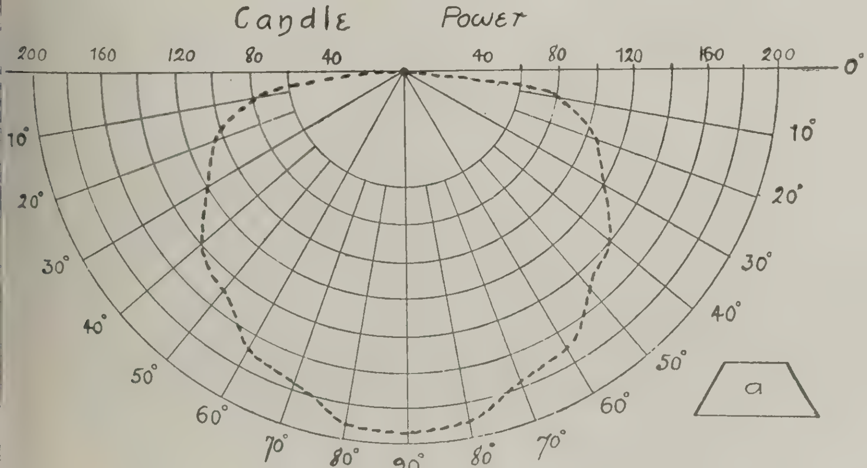


FIG. 2.

The Shading of Lights.

Attention to the question of shading constitutes nine-tenths of the art of industrial lighting. It is entirely one of sufficiency and efficiency, aesthetic considerations forming only a small part. In other words, it is a matter of pounds, shillings and pence, and the use of suitable shades will generally mean better illumination at less running cost. It should, of course, be remembered that the particular shade referred to in Fig. 2 is only one of many that are procurable. Different contours of reflecting surfaces produce different forms of light distribution, each of which has its particular usefulness; and it should be the business of the architect, in consultation, perhaps, with an illuminating gas engineer, to consider the special requirements of individual cases and provide accordingly. It is gratifying to know that appliances are procurable for any set of conditions.

Another factor in good industrial illumination which is closely allied to that of scientific shading is the arrangement of the sources of light as regards height and spacing. Generally, the distance between the separate units should be one and a half times to twice the height above the surface upon which the work is done, this proportion ensuring that the illuminations from the separate sources overlap each other so as to produce a uniform whole.

The amount of light necessary for good work naturally varies with the conditions; and the following brief summary may be regarded as representing good practice.

Description of Area to be Illuminated.	Illumination to be Provided.
Foundries	1½ to 2 ft. candles.
Printing Works (Compositors' Frames, etc.)	3 to 5 ft. candles.
General Engineering Works	3 to 5 ft. candles.
Automatic Machine Tools	3 to 5 ft. candles.
Wood Working Shops	3 to 4 ft. candles.
Drawing Offices	4 to 6 ft. candles.
General Offices	3 to 4 ft. candles.
Passages and Staircases	½ to 1 ft. candle.

It is useful to remember that one cubic foot of gas per hour used on the low pressure direct system will yield an illumination of one foot candle over 100 square feet of surface, so that the gas required for a given installation using ordinary low pressure gas can be readily computed thus:

Illumination (Foot Candles) X Area to be Lighted (Sq. Ft.), c. ft. of gas per hour, 100.

The high-pressure gas direct system is particularly suitable for industrial lighting, and being twice as efficient as the low-pressure system will require only one-half the gas given by the above calculation.

In addition to the direct system, two others, namely, the indirect and the semi-direct, are used for special work, but generally they are less suitable for industrial establishments. Besides the fact that they are much more expensive to run than the direct system, structural difficulties in workshops frequently preclude their use. We shall, however, refer to them in connection with other aspects of gas lighting.

For the moment we may briefly describe these systems as follows: The direct system, by far the most common, is the method by which about 70 per cent. of the total light is directed downwards and about 30 per cent. upwards towards the ceiling.

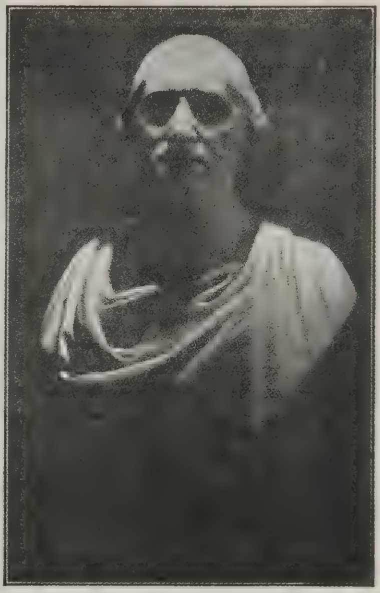


FIG. 3

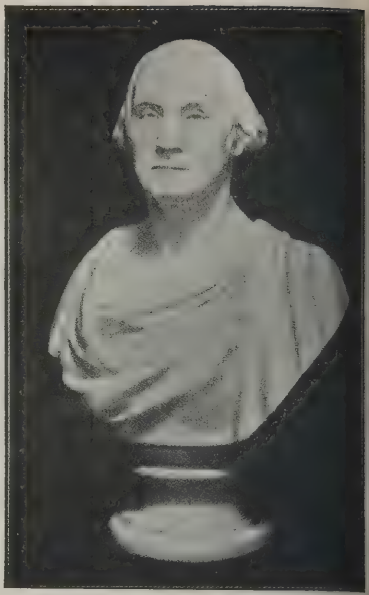


FIG. 4.

The semi-indirect is practically the complement of the direct, 70 per cent. of the total light going direct to the ceiling and only 30 per cent. downwards. The indirect system sends the whole of its light to the ceiling to be re-directed downwards. Clearly the use of the semi-indirect and the indirect system, dependent as it is upon the efficiency of the secondary reflecting surfaces, namely, the walls and ceiling, can only be used where these surfaces can be kept in a high state of cleanliness, a fact which almost always precludes their adoption in industrial establishments. Even when the walls and ceilings can be kept quite clean the indirect system is 100 per cent. and the semi-indirect system 50 per cent. more expensive than the direct system, assuming the same degree of illumination in each case.

Illumination in Public Institutions.

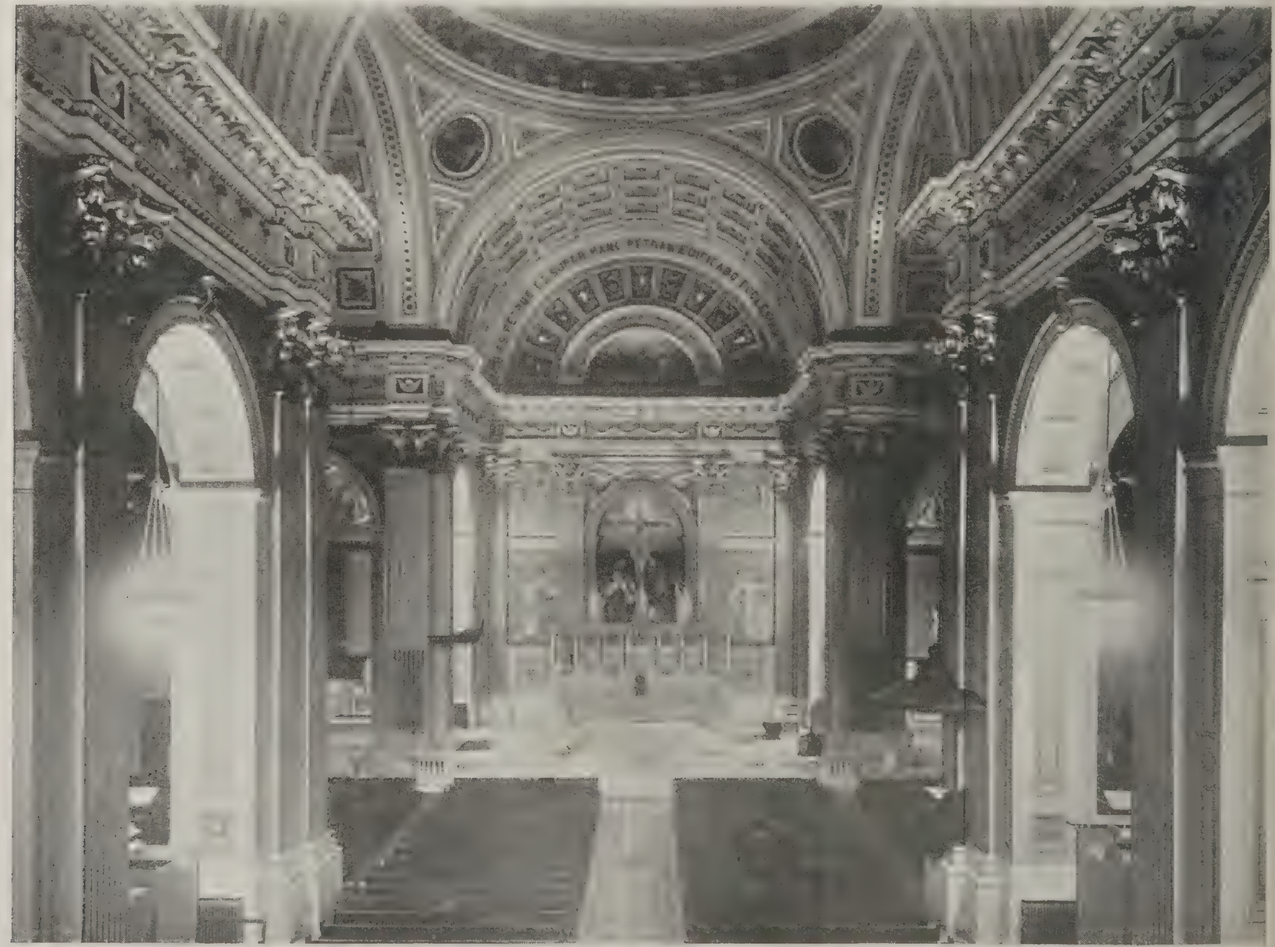
Church lighting is a matter that deserves the most careful consideration. It is beset with many difficulties, which, however, can be overcome by attention to certain principles.

The upper part of the work in many beautiful churches is frequently rendered entirely invisible by the adoption of an unsuitable scheme of lighting. In contradistinction to industrial lighting, church lighting should not be a matter of pounds, shillings, and pence, but should rather aim at revealing the architectural scheme at least as well as, and preferably better than, natural lighting. The semi-indirect system offers excellent opportunities for the exercise of skill in revealing the features of church architecture, and is worthy of the most careful study as an integral part of the architectural scheme.

The light provided in churches and other places possessing architectural features which ought to be visible in a pleasing form under all kinds of lighting, whether natural or artificial, should be as multi-directional as possible. The more nearly the illumination approaches to the uni-directional the harsher become the shadows, and in the end the features a mutilated so far as accurate visibility concerned.

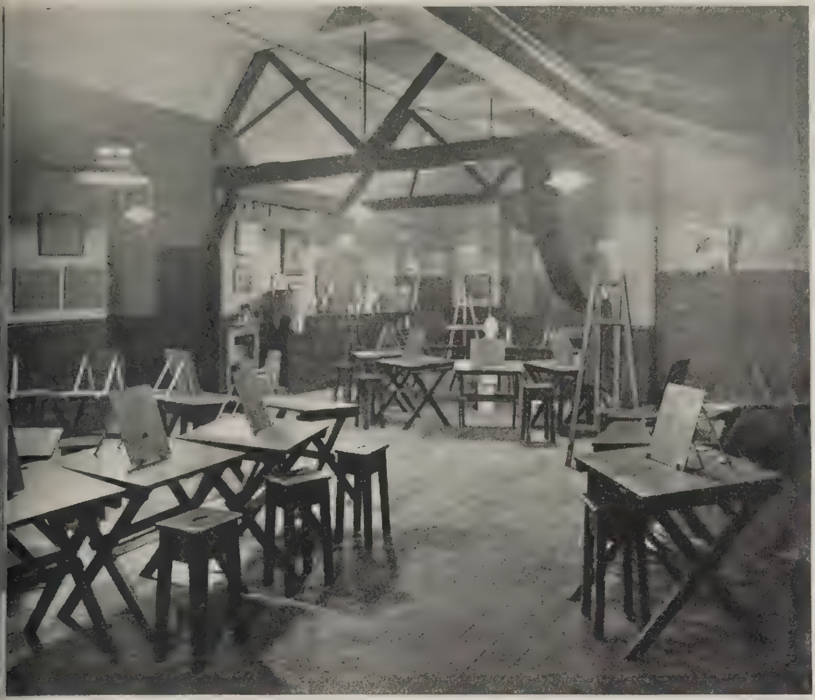
Illuminating the Speaker.

A point of very special importance is t illumination of the speaker. Fig. 3 sho the false expression resulting from a bad placed light. The placing of a single a too powerful lamp above the head of t



Illuminated by Semi-Indirect Gas Lamps.

FIG. 5.—CATHEDRAL OF SS. PETER AND PAUL, PHILADELPHIA.



Illuminated by inverted incandescent gas-burners.

FIG. 6.—ART ROOM, WESTMINSTER CITY SCHOOL.

gives the appearance of a veritable
ead and clearly deprives him of
of facial expression. The defect
due to the uni-directional charac-
light. Fig. 4 shows the defect

is no physical reason why church
ire or any other architecture
ot be illuminated so as to be
en at all times; and the matter
orth the attention of the architect.
rtificial illumination of church
from the outside so as to render
ible from the inside during the
artificial lighting has, so far as
r is aware, never been carried
vertheless, it is a perfectly prac-
one would think a desirable pro-

is a reproduction of a photo
ken at night) of the interior of
edral of SS. Peter and Paul,
hia. It is lighted by semi-
gas lamps, the installation having
rried out by the illuminating
s of the United Gas Improvement
adelphia.

with the problem of revealing in-
hitecture is that of illuminating
architecture. The many beautiful
in London and elsewhere are
y invisible after sunset owing
the very small amount of light
ls upon them from the street
d partly to the contrast with the
bright illumination of the
y the street lamps. Some years
writer drew attention to the need
ecial illumination of some, at any
e buildings in English towns and
Considerable development on
es has taken place in America,
recent example of which is the
ion of the statue of Liberty at the
to New York harbour. The
of light are hidden from direct
d are disposed so as to graduate
and shade of the statue as nearly
le in accordance with the effect
by natural lighting. "Flood Lighting" is the term generally applied to work of this kind.

The lighting equipment of art schools and museums is closely akin to the subject just discussed. Similar principles must be observed, namely, the provision of a soft diffused multi-directional light in order to ensure true expression.

Fig. 6 is a view of the art room at the Westminster City School. It is lighted by inverted incandescent gas burners, the illumination on the working surfaces being 6 to 15 foot candles.

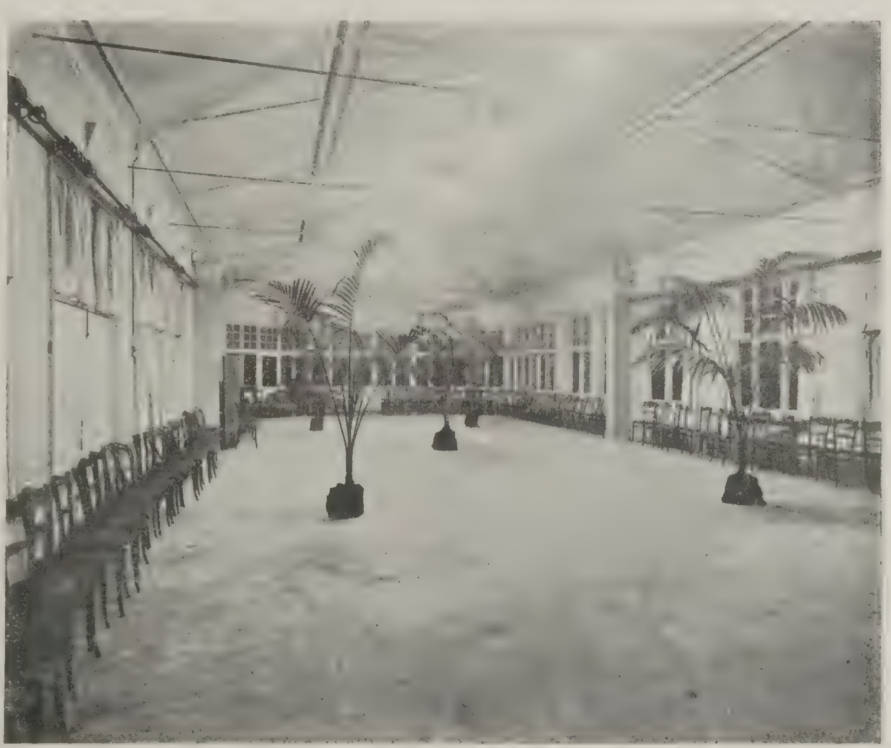
The foregoing remarks are mainly directed to the type of lighting unit. But there is another consideration which frequently calls for studied attention and often imposes certain limitations as to the type to be employed, namely, the fixture that supports the unit. In some old places of worship these fixtures are highly treasured, and a great deal of ingenuity is needed to harmonise their antiquity with the modern lighting unit.

The Hygienic Aspect.

There is a very important aspect of gas lighting in public buildings which should appeal specially to the architect; that is the question of ventilation.

It is a demonstrable fact that potentially one cubic foot of gas can set in motion about 3,000 cubic feet of air; that is to say, for each cubic foot of gas consumed it is possible under favourable conditions to eject from a building 3,000 cubic feet of air. This fact gives particular significance to the value of gas lighting in public buildings where large bodies of people assemble and an abundance of fresh air is required. The above figure, namely, 3,000 cubic feet of air per cubic foot of gas, is ideal, the percentage obtainable in practice depending upon local conditions. Ventilation is always a very subtle problem, and it is not intended to discuss it in detail here; but it may be said that "air change" and "air movement" are important factors. The manufacture of gas lamps specially designed so that the best use can be made of their ventilating power has been considerably developed during the past few years. Fig. 7 shows an installation of such lamps. They may be controlled from easily accessible positions by means of pneumatic or other switches.

There are seven five-burner ventilating gas lamps, each of 500 candle-power, consuming twenty cubic feet of gas per hour. This installation was carried out by the



Illuminated by Ventilating Gas Lamps.

FIG. 7.—BANQUETING HALL AND BALLROOM OF THE FELLOWS OF THE ROYAL BOTANICAL SOCIETY, REGENT'S PARK, LONDON.

experts of the Gas Light and Coke Co., to the instructions of the committee of the Royal Botanical Society.

Fig. 8 is another interesting application of gas as a ventilating agent. In addition to the ventilating lamp we see exposed two nests of gas-heated radiators for controlling the temperature of the incoming air. By a special arrangement of valves the temperature can be changed almost instantaneously, so that the uncertain nature of the English climate can always be met.

This installation was carried out by the heating and lighting experts of the Gas Light and Coke Co., to the instructions of the Society of Medical Officers of Health.

Illumination of Public Thoroughfares.

The correct illumination of our public thoroughfares in normal times is a much more important matter than it used to be. The rapid extension of high speed and heavy motor traffic has rendered the road an unsafe place for the pedestrian, but much of the risk may be avoided by a suitable system of lighting. The past ten years have seen some very remarkable developments and, speaking in a pre-war sense, it may be said that the degree of illumination provided nowadays is at least ten times as much as it was twenty years ago. This does not mean that expenditure on this work has been lavish; on the contrary, it is generally less, the whole improvement being due to better methods of producing and distributing the light.

The gas lamps used for modern street lighting vary from about 80 to 4,500 candle-power, the former being sufficient for certain streets not much used by fast vehicular traffic. For units about 300 candle-power it is usual to resort to what is known as high-pressure gas lighting. Lower candle-powers are usually provided by lamps supplied with low-pressure gas.

Town Planning and Street Lighting.

As with other aspects of artificial lighting, the choice of the lighting unit and of an appropriate shade is important if the light is to be directed in the most satisfactory manner. Modern practice in public lighting is to provide an installation of lamps each of an agreed candle-power measured in given directions. This is verified from time to time by a photometer. Such methods have been in existence in London for about ten years, and experience shows that they form a sound basis to work upon. This system of specifying and evaluating the power of public lamps was originally worked out by Mr. Dugdale Bradley, engineer and surveyor to the City of Westminster, and has since been further developed by him and adopted in other parts of the country.

It is important for the town planner to determine the importance of a thoroughfare before deciding the amount of light it shall receive. Broadly, thoroughfares may be considered under two headings, namely, those which need sufficient illumination for the clear distinction of objects, and those which require only an occasional light for the guidance of the public. This latter variety is sometimes known as beacon lighting, the lamps being placed so far apart as to yield practically no illumination in the intermediate region, but still sufficiently near to each other to allow at least two lamps to be always visible. This frugal use of light aims at economy, but should be superseded by a more ambitious scheme as the neighbourhood develops.

The use of lamps on brackets instead of posts is often worthy of consideration, but in this case it is necessary to obtain the co-operation of the owner of the premises facing the thoroughfare. Nevertheless, it frequently forms a useful expedient where footways are so narrow as to render posts undesirable.

Illumination in the Home.

The subject of lighting in the home ought to be touched upon, but a difficulty arises from the ancient but commendable idea that "an Englishman's home is his castle," and scientific principles are not popular in home life, and generally the lighting, like other matters of decoration, will follow the taste of the occupants, and more particularly of the feminine section. Nevertheless, reference may be made to some aspects of the question.

It is well known that the lighting effect of a given installation depends in some measure on the colour and brightness of the surrounding walls. In large places such as public buildings, this is of minor importance, because of the remoteness of the walls from each other; but as the walls come nearer together, until they bound the space of, say, an ordinary drawing-room, their character becomes increasingly important. In view of the wide variety of colours used in modern wall decorations, ranging from a pale cream to a dark chocolate, this effect is one which the architect should bear in mind when advising his clients. The darker decoration might need anything up to 100 per cent. more light than would be sufficient with the lighter surface.

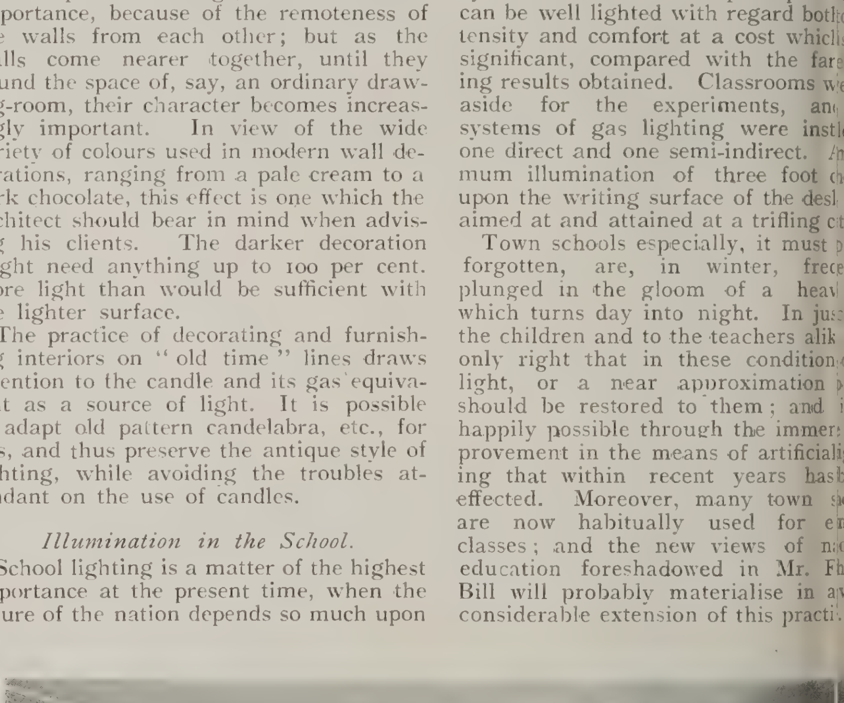
The practice of decorating and furnishing interiors on "old time" lines draws attention to the candle and its gas equivalent as a source of light. It is possible to adapt old pattern candelabra, etc., for gas, and thus preserve the antique style of lighting, while avoiding the troubles attendant on the use of candles.

Illumination in the School.

School lighting is a matter of the highest importance at the present time, when the future of the nation depends so much upon the educational equipment of the
generation; yet unhappily the l
capacity of many children is impa
defects of vision.

Many architects, conscious of wh
have believed to be the total inac
of artificial lighting of any kind, ha
driven to the conclusion that schoo
should be limited to the daylight
The superiority of natural as co
with artificial lighting in schoo
hardly be gainsaid: nevertheless, s
idea casts a quite undeserved slur u
lighting industries. It is, unfortu
true that many schools are badly e
in the matter of lighting, and an
tion of them might easily give ris
belief that artificial lighting should
ever possible, be avoided. Recently
ever, experiments made in London
School Lighting Committee of th
minating Engineers' Society, prov
by attention to certain principles
can be well lighted with regard bot
tensity and comfort at a cost whicl
significant, compared with the far
ing results obtained. Classrooms w
aside for the experiments, an
systems of gas lighting were inst
one direct and one semi-indirect.
mum illumination of three foot
upon the writing surface of the des
aimed at and attained at a trifling c

Town schools especially, it must
forgotten, are, in winter, fre
plunged in the gloom of a hea
which turns day into night. In ju
the children and to the teachers alik
only right that in these condition
light, or a near approximation
should be restored to them; and
happily possible through the imme
provement in the means of artificial
ing that within recent years has
effected. Moreover, many town
are now habitually used for e
classes; and the new views of n
education foreshadowed in Mr. F
Bill will probably materialise in a
considerable extension of this practi



Note Ventilating System (Casings Open.)

FIG. 8.—COUNCIL HALL OF THE SOCIETY OF MEDICAL OFFICERS OF HEAL

. B

THE
PLANNING AND DESIGN
OF
MODERN SCHOOL BUILDINGS

SPECIAL SUPPLEMENT
TO
THE ARCHITECTS' AND
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WEDNESDAY, DECEMBER 26, 1917.

TECHNICAL JOURNALS, LIMITED,
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PREFACE.

N Great Britain modern school-building received its greatest impetus from "An Act to provide for public Elementary Education in England and Wales," which was passed on August 9, 1870. Until then, the promoters of popular ucation raised funds as best they could, and the hool premises they built were, as a rule, mean and verty-stricken. In country districts many of the hools that were put up by voluntary effort are still nding, and a writer in the "Athenæum" for Novem- r, 1917, thus describes them: "In spite of many provements, the old schools remain draughty, stuffy, sty, and cold. The doors are often 'church doors,' hich are much too large and do not fit perfectly. The oring is of the wrong kind—of soft old boards which e eternally dusty, in spite of the best efforts; and ey are still heated by open fires or stoves, which, wever well-stoked, are quite inadequate. Another eat defect is the very poor provision of cloak- oms. These are generally the lobbies of the hool—you open the school door and find yourself the middle of the boys' or girls' cloakroom. The ace is inadequate and the position unhealthy; ch miserable provision as there is for children to ash themselves is made among the clothes." This a sufficiently heavy indictment, without going o the further details given in the article cited.

It is surprising that such schools should have sur- ed the Education Act, and the fact that they have ne so supports the demand for buildings of much less rmanent character, which would not only cost less construct, and perhaps to maintain, but would not, outliving the educational methods, ideas, and con- ions they were designed to meet, linger on as sitive obstacles to reform—old bottles into which new ferment may not be poured with impunity. A iking instance of the material effect of a mere ange of practice is that relating to the size of classes lementary schools. The decision that classes must be aller if teaching is to be effective involves structural erations so extensive and costly that the London ucation authority had to plead for leave to spread work over a period of sixteen years. It will be nembered, also, to how great an expense the sup- rters of voluntary schools were put when, a few ars back, they were compelled to bring their schools o conformity with modern requirements. Following on these inconveniences, it became necessary to hold departmental inquiry," and in the subsequent report ess was laid on the desirability of building schools "the newer and lighter materials of construction." wenty, and thirty, and forty years on," as Mr. E. E. wen's fine Harrow School song counts it, views of ication may have changed radically, and the science school-building may by then have developed imaginably. It is therefore wise as well as econo- cal to build schools that shall suffice to serve their y and generation, but shall not embarrass progress, becoming obsolete long before they are worn out.

The appointment of a Minister of Education, and the gramme he has drawn up, foreshadow changes that even more revolutionary than those brought about the Education Act of nearly fifty years ago. As Mr. H. A. L. Fisher said in introducing his Bill on August 10, 1917, it was the intention "to make an effective survey of the whole educational provisions of the country, and to bring private educational institutions into closer and more convenient relation to the national system." This survey includes in its wide sweep all education and every class and type of school, and, in a manner, will link them all together, so that the very buildings will react on each other more sympathetically than hitherto, and much more directly.

It was not until schools innumerable were required under the Act of 1870 that the study of school architecture in this country became really systematic and intensive; and the experience gained in designing thousands of elementary schools naturally influenced schools of higher grade. Problems of planning, lighting, warming and ventilating, and sanitation were solved afresh, and what is called the "science" of school-building then first emerged. It is still in process of development; and it is with the object of assisting in its development that the present collection of representative types of modern schools—technical, secondary, elementary, and special—has been here brought together. These examples, it is confidently assumed, will form a sound basis for study of the whole subject of school design, and should be prolific in suggestion for future developments. Ideas do not spring up into the mind by a sort of spontaneous generation, but are derived from close observation of what, being already done, is susceptible of improvement, or from discernment of what is lacking in the object examined. To the extent to which this purpose is assisted by the present collection, we shall have attained our object of furthering, from the architectural standpoint, the cause of national education.

In Mr. Fisher's Bill—which, although temporarily dropped, is sure to be revived in substantially the same form—there are certain provisions that point directly to a large increase in the number of schools, and to certain modifications in those already existing. Additional accommodation will be required as a consequence of keeping at school until a later age numbers of children who are now claimed earlier for factory or field; nursery schools, apparently of a new type, are expressly mentioned; central schools for higher elementary education are foreshadowed; continuation schools, acquiring new functions and a higher importance, will probably require special buildings; and there is a broad hint that the premises of many private schools will be superseded; and open-air schools will no doubt be considerably augmented and improved.

In secondary as well as in elementary schools, science laboratories will be indispensable; nor will the arts and crafts, nor drill and physical education be neglected. In short, we are on the eve of a complete renascence of national education; and it is believed that the present collection of modern schools of various types will be of great assistance to architects, educational authorities, and others who are preparing to take part in this great and momentous new movement, upon the success of which the national welfare so greatly depends. For right education spells prosperity in peace and war.

I.—SCIENCE AND TECHNICAL SCHOOLS.

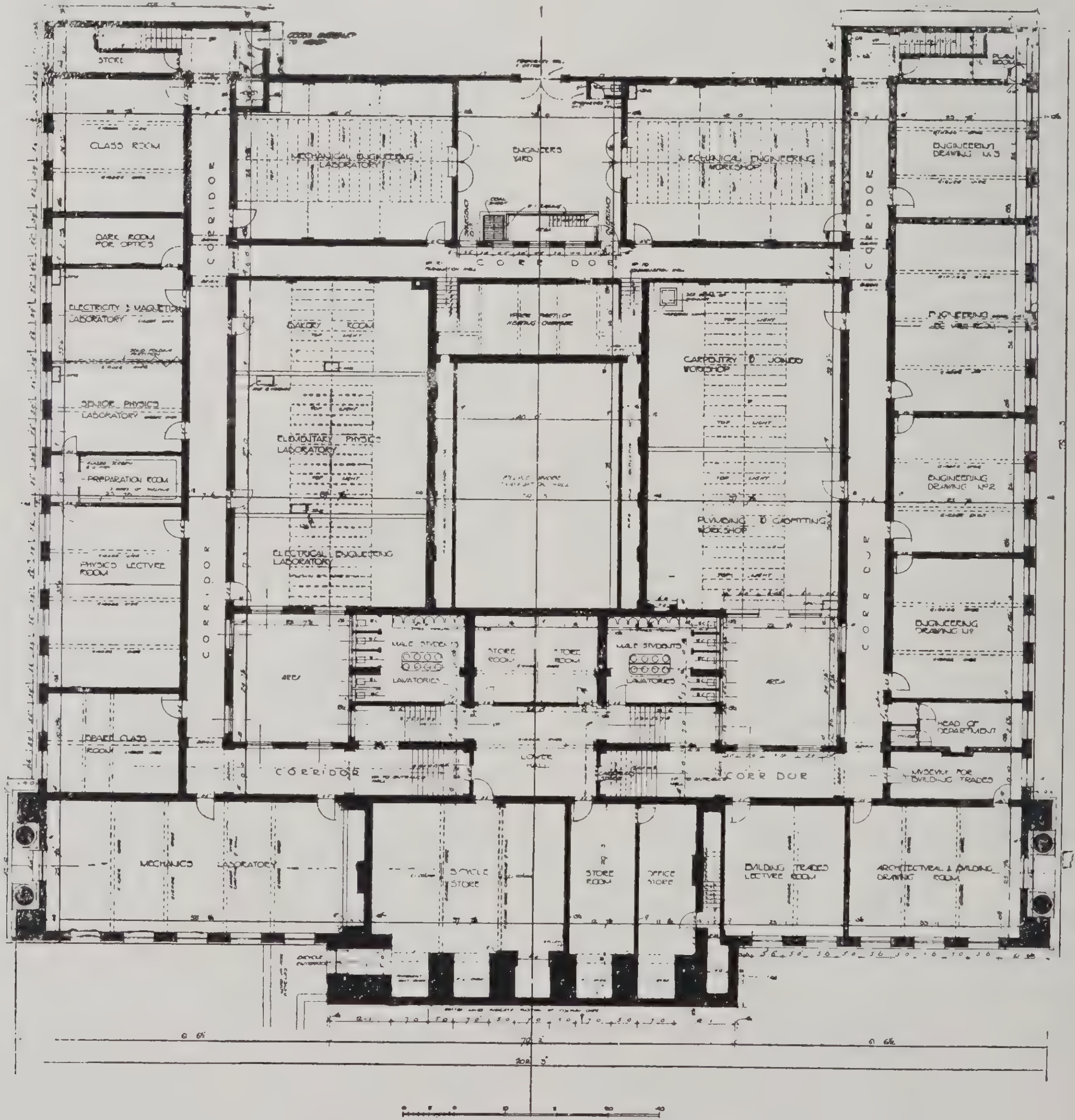
CARDIFF TECHNICAL INSTITUTE.

THIS building adjoins the Glamorgan County Hall in Cathays Park, Cardiff, facing King Edward VII. Avenue. It forms roughly three sides of a quadrangle (the fourth side reserved for future extension), and consists of three floors.

The building is constructed generally of local brickwork, faced with Portland stone on the front and side elevations. The main staircase is of reinforced concrete. The floors throughout are formed of six inches of concrete between rolled steel joists. The main roofs are covered with Dolemaen silver-grey random slates, and other roofs with Portmadoc blue slates. The halls, corridors, lavatories, etc., are finished with terrazzo flooring, the floors of the rooms being laid with pitch-pine blocks.

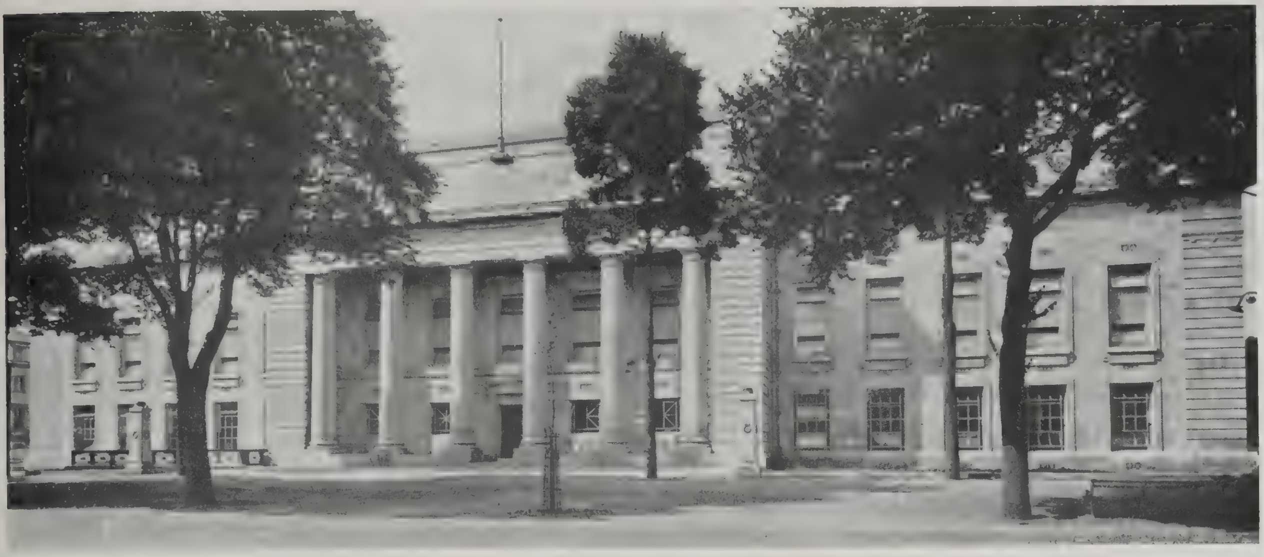
Heating is by hot water supplied from central boilers with accelerated circulation. This system provides a particularly uniform temperature throughout the building and also economises the consumption of fuel. Provision is made for working in sections, and also for shutting off any portion not required. For the ventilating of the building, fresh-air inlets are provided in connecti with the radiators, each inlet being under contro

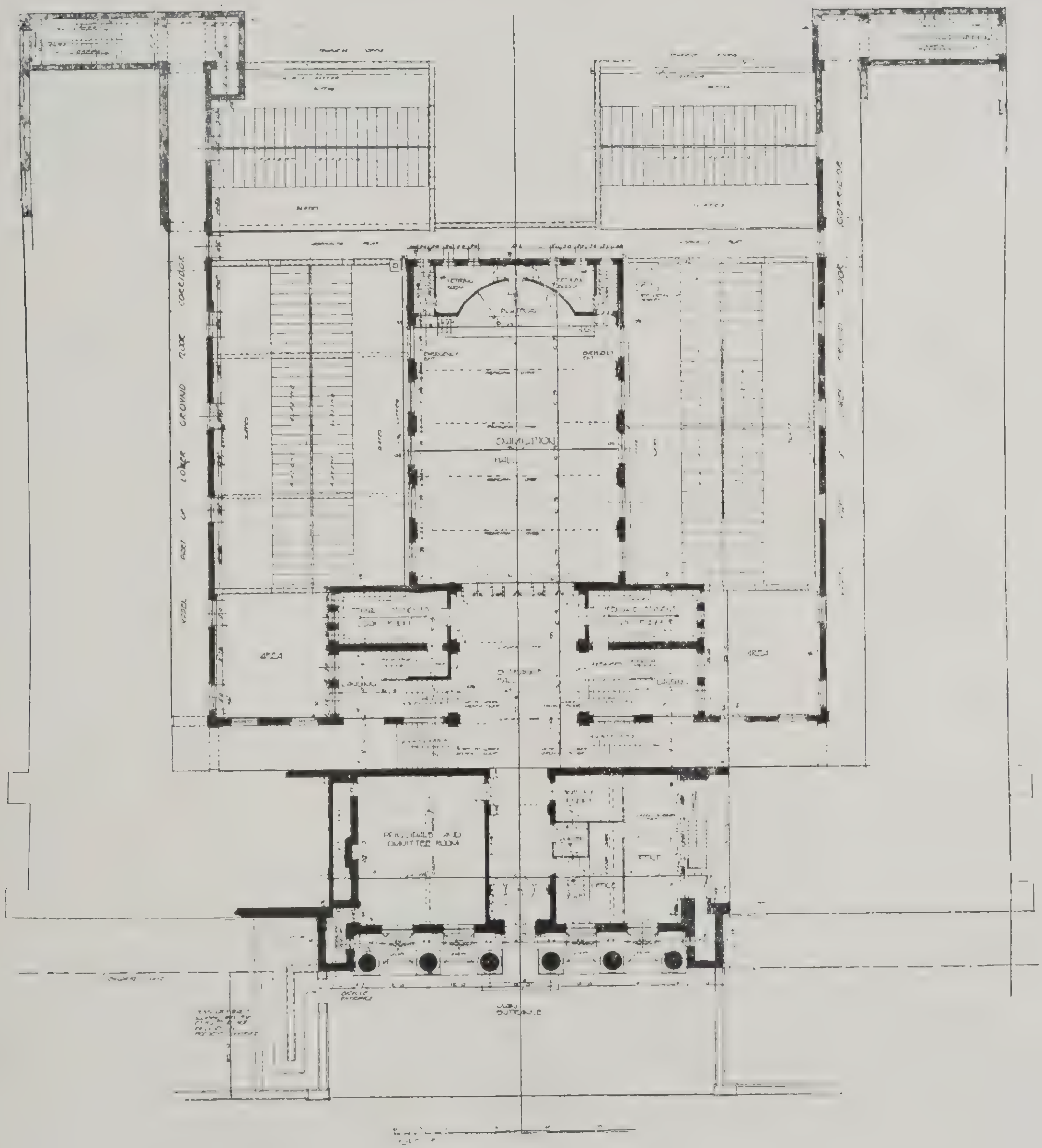
Fireplaces are provided in all rooms for the teac ing staff, and in the students' common-room a reference library, offices, etc. The general co tractors were Messrs. E. Turner and Sons, Lt of Cardiff. The following works were executed sub-contractors: Steelwork, supplied and erect by Messrs. Archibald D. Dawnay and Sons, Lt of London and Cardiff; patent roof glazing Messrs. Henry Hope and Sons, Ltd., of Birmin ham; wrought steel sashes, leaded light glazin wrought iron balustrade to main and seconda staircases, wrought iron railing, five-light electr liers, bronze galleries for lamp standards, and ca bronze wreaths and ribbons by Messrs. Geor Wragge, Ltd., of Salford, Manchester; oak fenci and gates by Messrs. John P. White and Sons, Lt of Bedford; goods lift by Messrs. Smith, Maj and Stevens, of Northampton; electric light inst lation by Messrs. H. J. Cash and Co., Westminst The stone carving to the main entrance was ex cuted by Mr. Albert Hodge.



CARDIFF TECHNICAL INSTITUTE: LOWER GROUND-FLOOR PLAN.

IVOR JONES AND PERCY THOMAS, ARCHITECTS.





CARDIFF TECHNICAL INSTITUTE: FRONT ELEVATION AND MEZZANINE-FLOOR PLAN.

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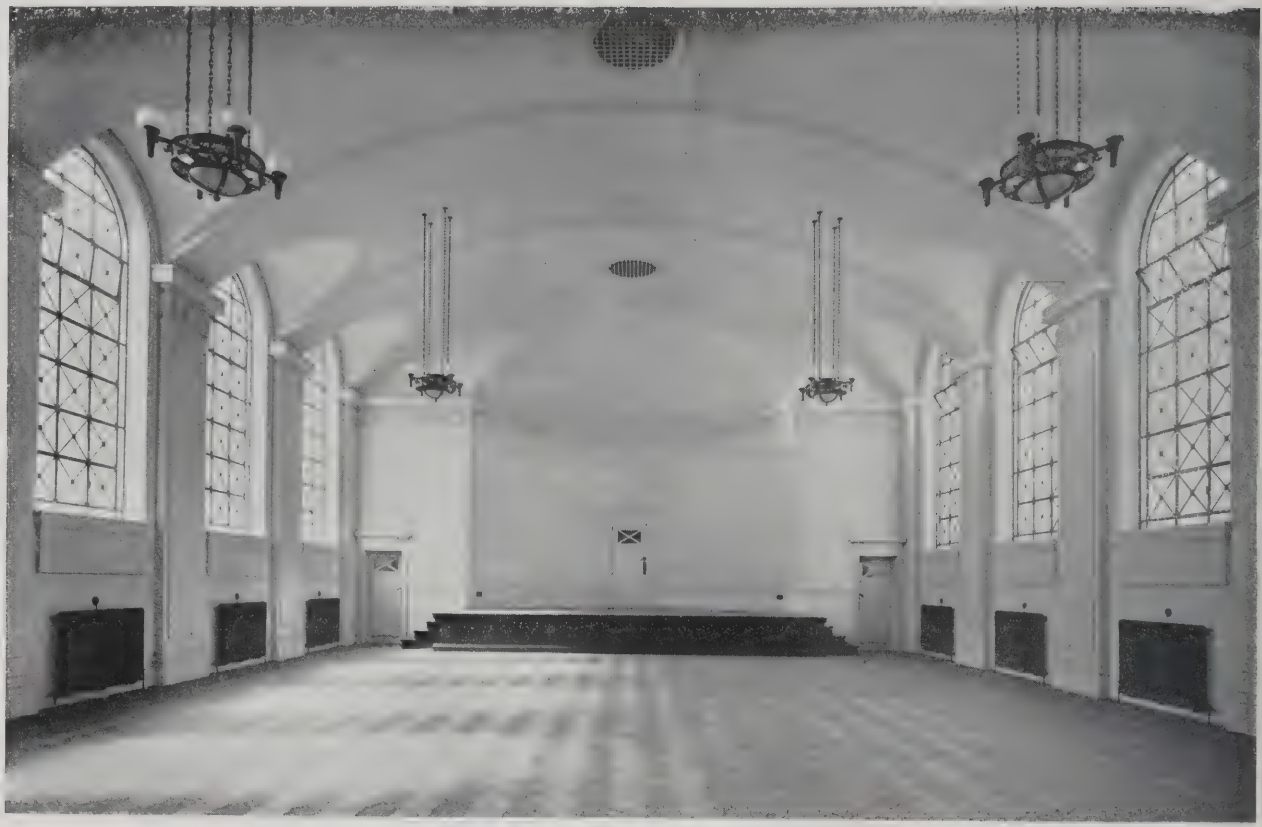
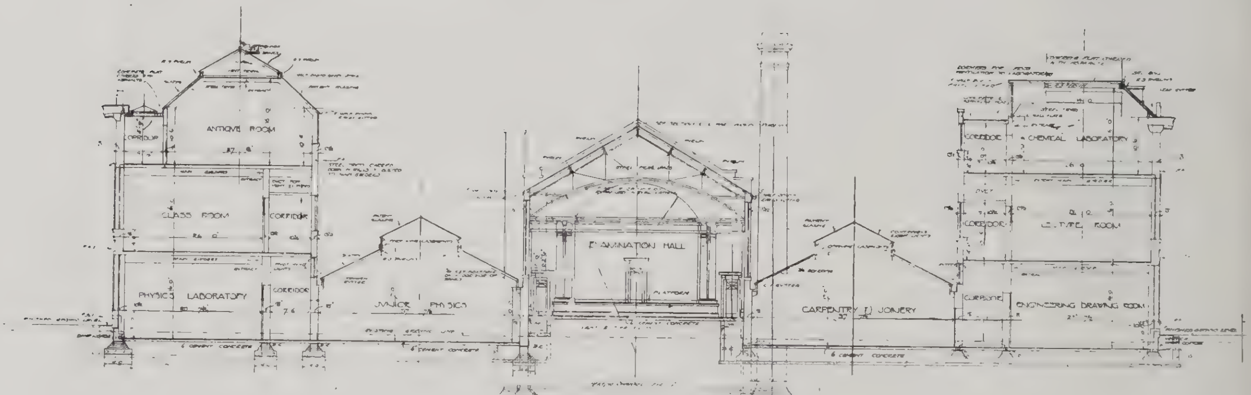


Examinations Hall.



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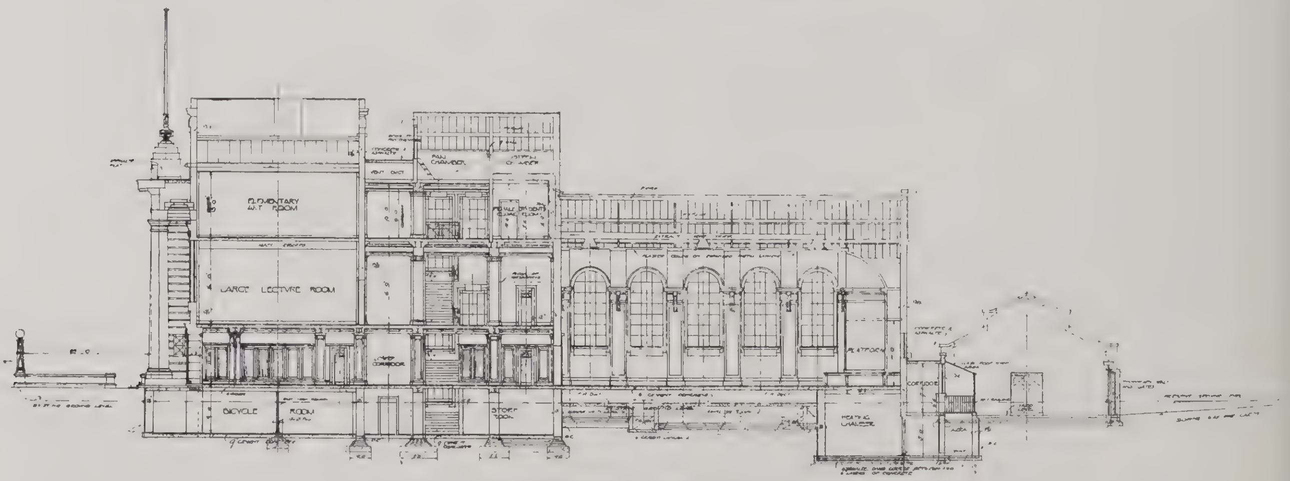
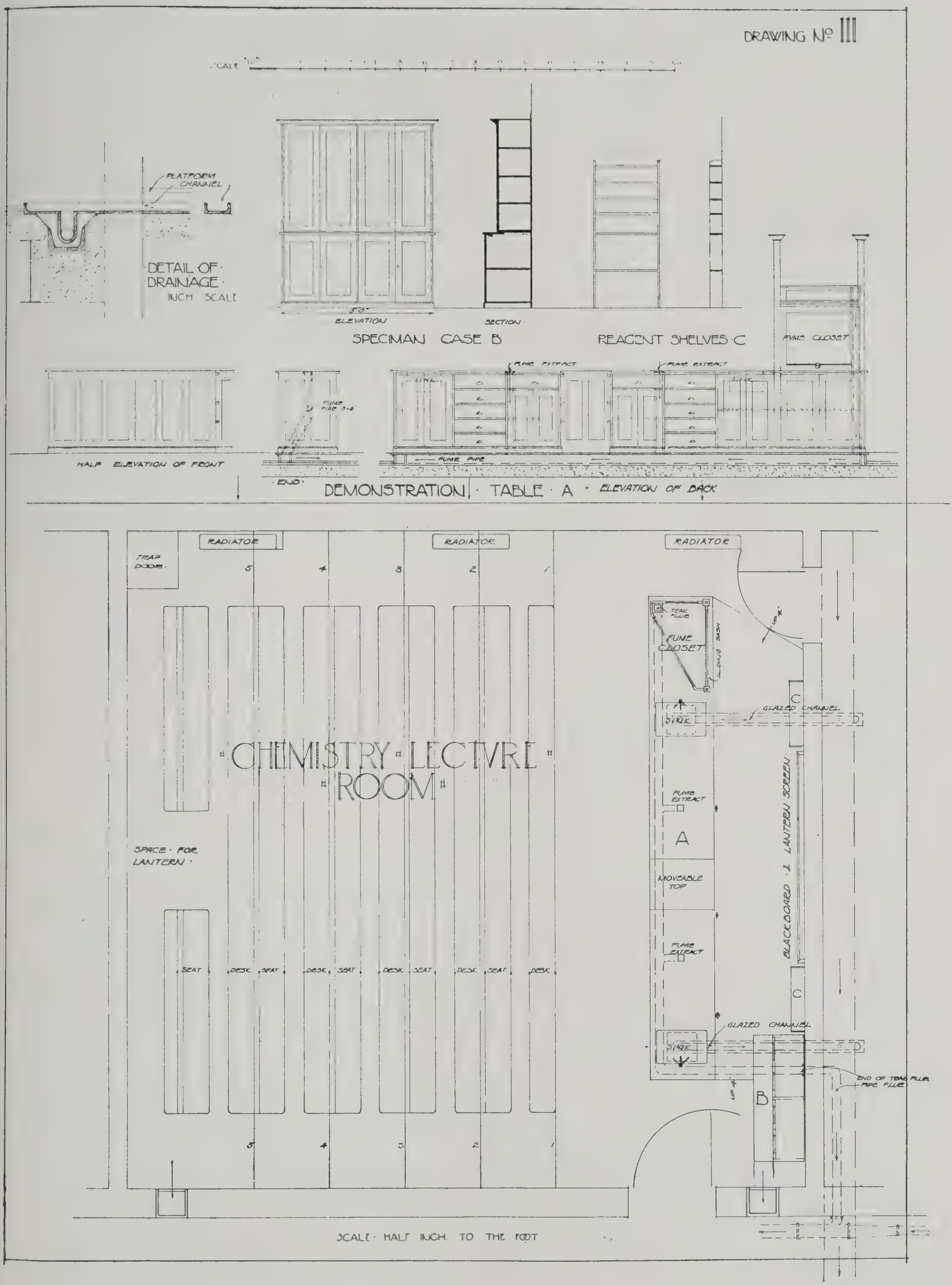


LONGITUDINAL SECTION

SCALE OF FEET

CARDIFF TECHNICAL INSTITUTE.

IVOR JONES AND PERCY THOMAS,RCHITECTS.



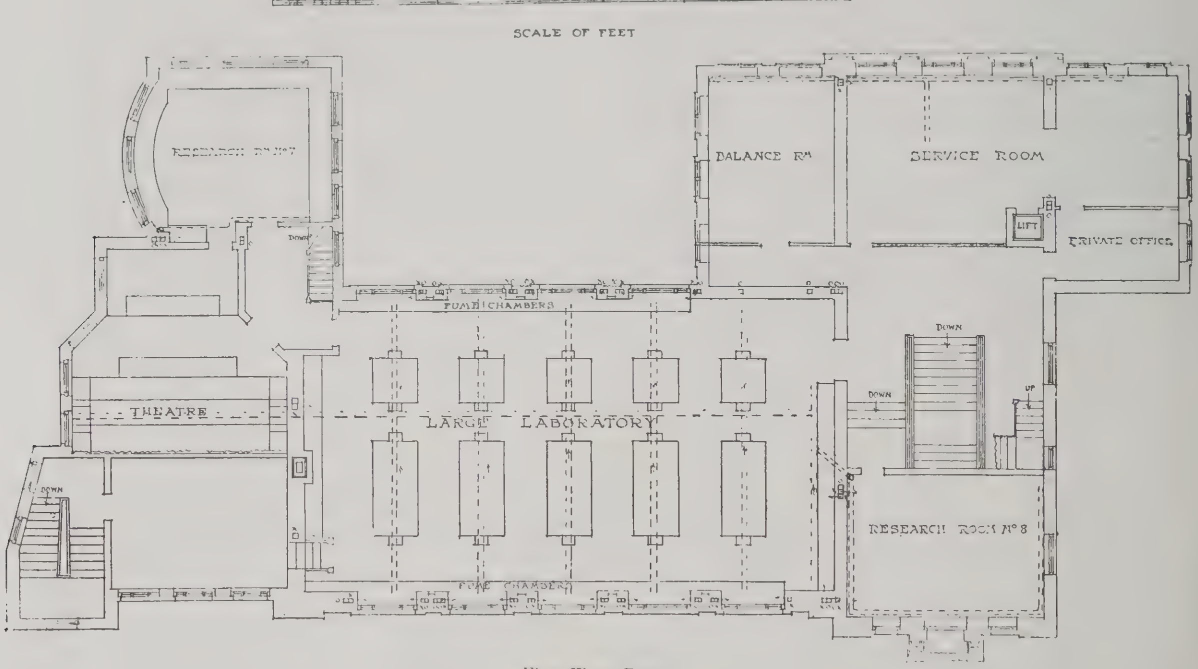
CARDIFF TECHNICAL INSTITUTE: CHEMISTRY LECTURE ROOM.

IVOR JONES AND PERCY THOMAS, ARCHITECTS.

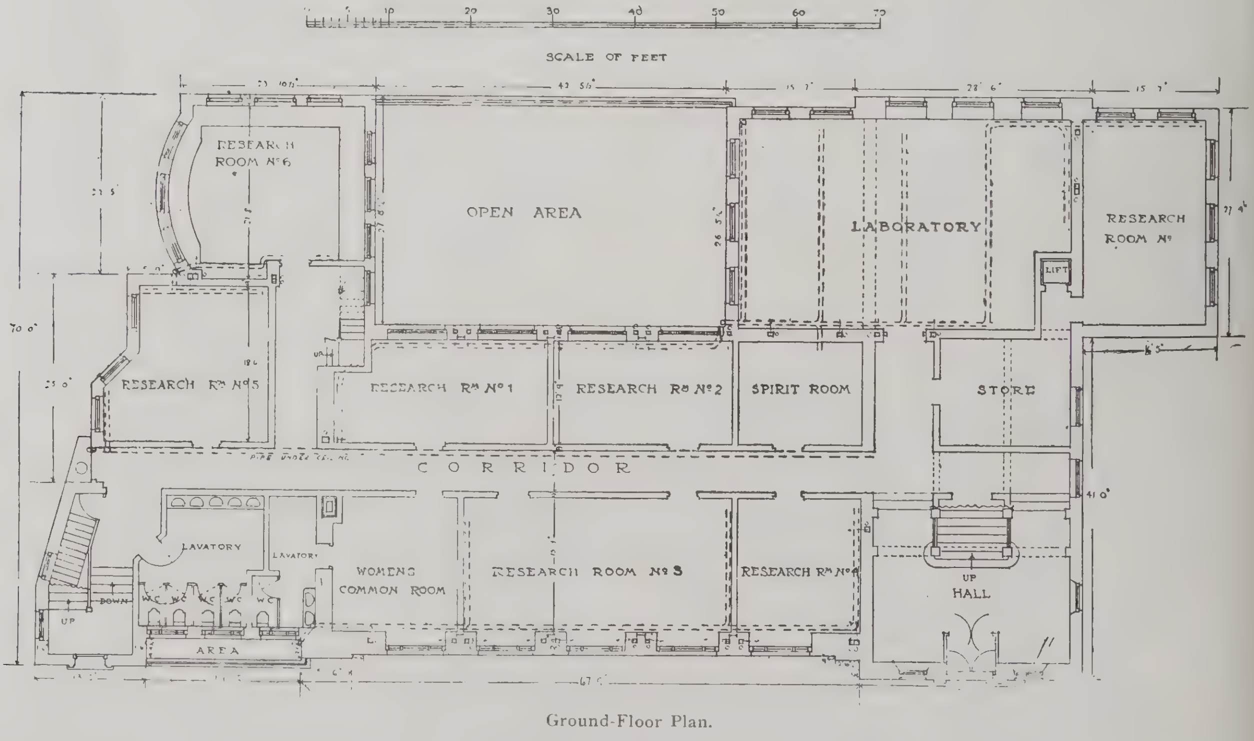
NEW CHEMISTRY LABORATORIES, OXFORD.

THESE research laboratories are presided over by Professor Perkin, the necessary funds having been provided by Mr. C. W. Dyson Perrins. The two names, "Perrins and Perkin," have been ingeniously associated by the architect, Mr. Paul Waterhouse, in a chronogram cut in a stone on the main façade to South Park Road. The plan of the building comprises a central block, containing the entrance and main staircase, a service-room, the Professor's room, laboratory, and private room, with two wings, each consisting, on the upper floor, of a large laboratory, 64 ft. by 35 ft., and a lower floor, divided into separate research rooms. Of these wings the western is now erected (as shown in our photograph of the exterior), but the eastern remains to be added later, if funds are forthcoming. The principal feature is th large laboratory. Its height to the apex of the roof 33 ft. It is lighted by a continuous skylight, as well a by large windows, each of which is fitted with a glaze fume chamber. The piers between the window accommodate the flues. The roof is of pitch-pine, th walls are of glazed brick, the metal part of the window is of bronze, the drainage channels are of stonewar and the benches are of pitch-pine with mahogany top Electricity is employed throughout for lighting, f ventilation, and for working a powerful lift, which goe right through the building to the roof. At the wester end of the wing are a library and lecture theatre.

Messrs. Armitage and Hodgson were the gener contractors.

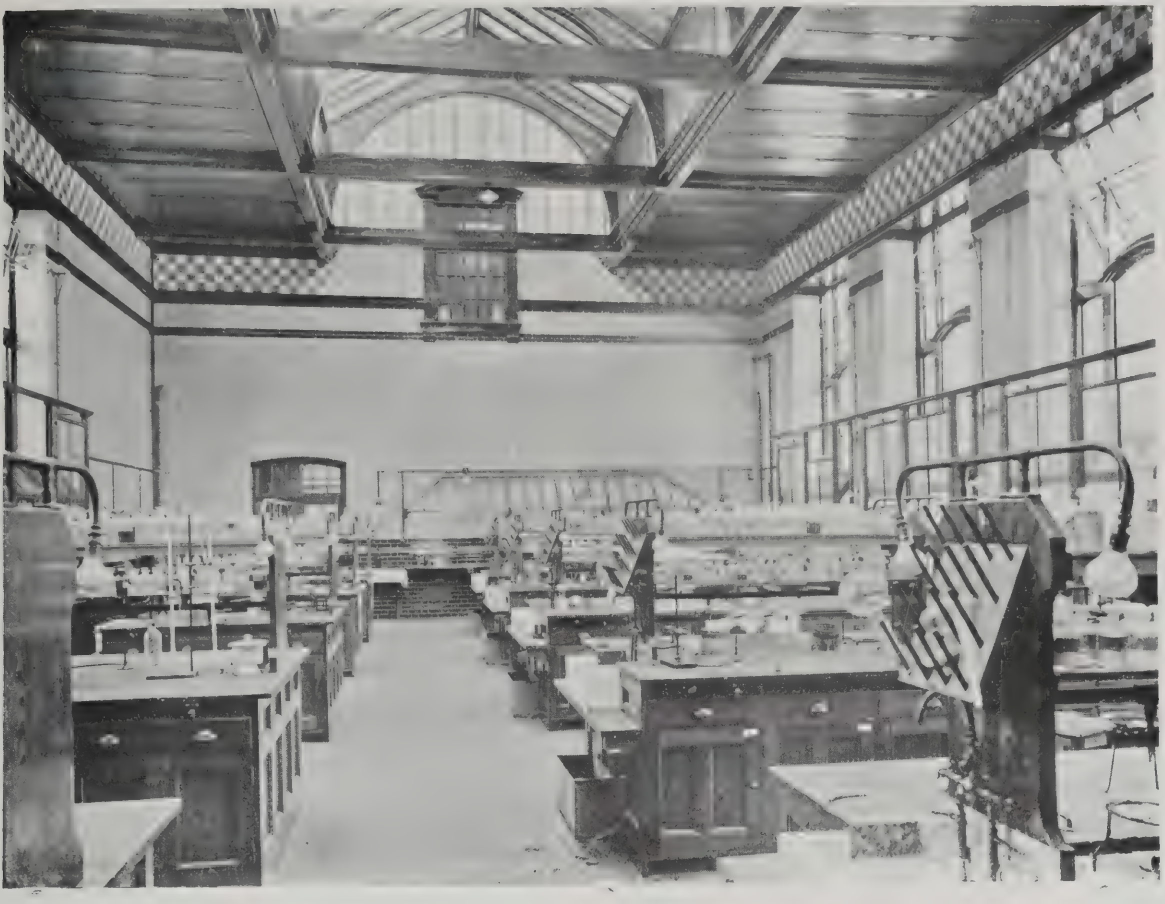


First-Floor Plan.

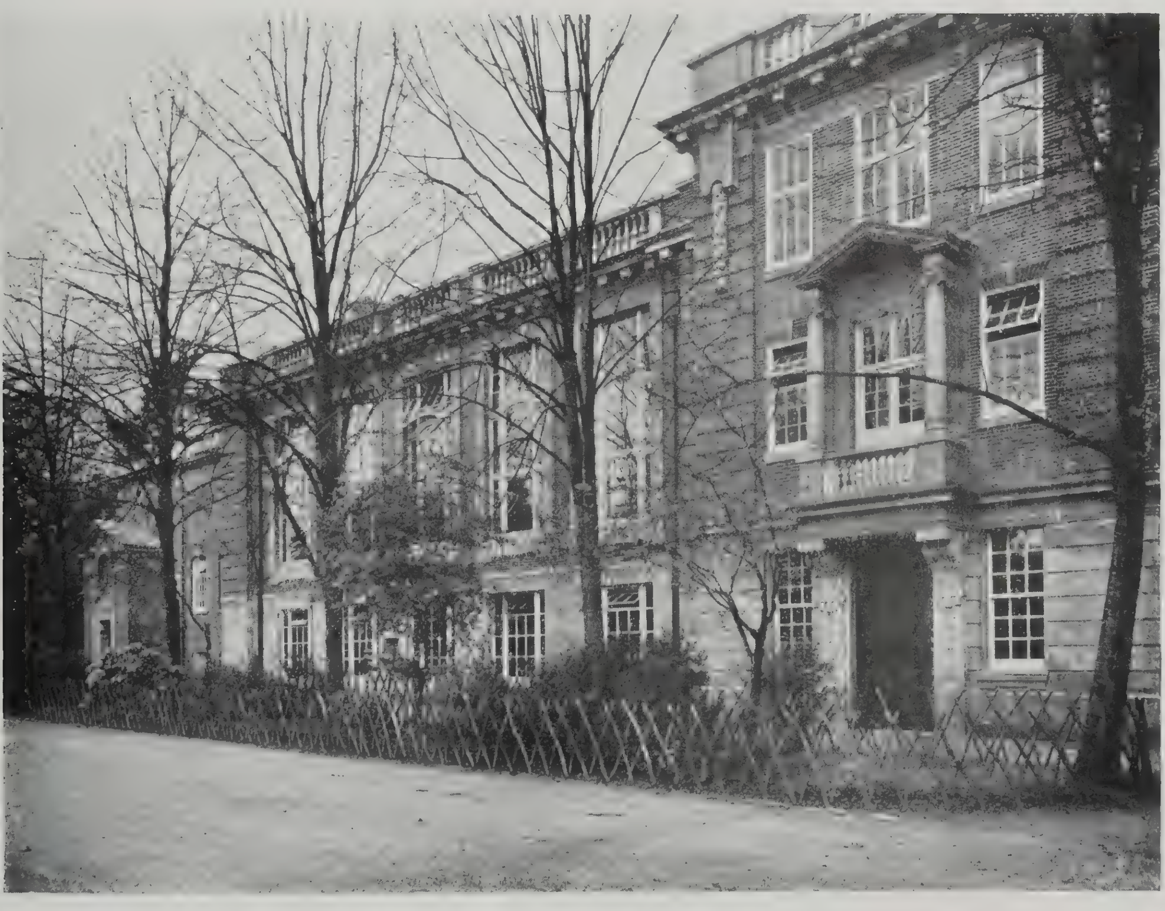


Ground-Floor Plan.

CHEMISTRY BUILDING FOR THE UNIVERSITY OF OXFORD. PAUL WATERHOUSE, M.A., F.R.I.B.A., ARCHITECT.



Main Laboratory, First Floor.



Façade to South Park Road.

CHEMISTRY BUILDING FOR THE UNIVERSITY OF OXFORD.

PAUL WATERHOUSE, M.A., F.R.I.B.A., ARCHITECT.

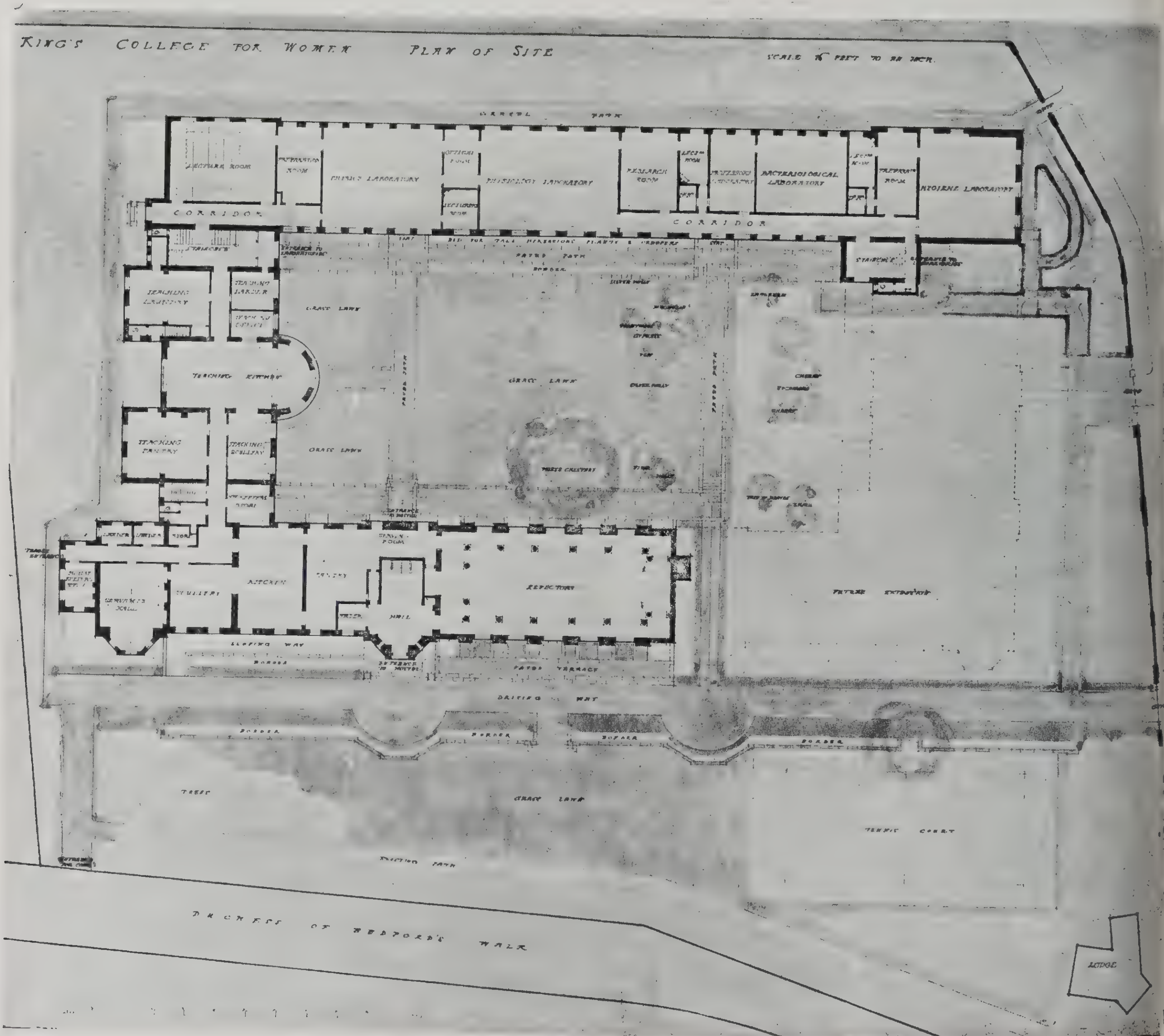
KING,S COLLEGE FOR WOMEN.

KING'S COLLEGE for Women (University of London) is the outcome of an idea inaugurated eight years ago, when courses in domestic and social science were instituted by King's College for Women, with a view to providing education in science and economics of a University standard, and applying the principles thus taught to the management of the home and of young children, to the hygienic and businesslike conduct of institutions, to the laws and economic conditions affecting the employment of women in factories and workshops, etc.

The lectures given are expressly adapted to the needs of women wishing to prepare themselves for the efficient management of their own homes, and for stimulating that interest which knowledge and thought can develop in those subjects with which all women are more or less concerned, whatever their other objects may be. The training also fits them for posts as teachers, and for other spheres both professional and voluntary, includi inspection, work on district councils and ot public bodies, and especially for housekeeping a large scale. There are also many openings co nected with the interests of public health, t demand for trained social workers in connecti with which is constantly increasing.

The grouping of studies within the courses n includes (three years' course) biology, chemist physics, hygiene, physiology, household wo (cookery, laundry, and housewifery), econom (including a short course in book-keeping and bu ness affairs), ethics, and psychology. Thus it w be seen that this is an endeavour to treat all su jects connected with the household both scienti cally and practically, and in every case to link the practical arts with the scientific principles which they are based.

The buildings ultimately will form a comple quadrangle, but, as will be seen from the plan, tl



KING'S COLLEGE FOR WOMEN, CAMPDEN HILL, KENSINGTON, LONDON: GROUND-FLOOR PLAN.

H. PERCY ADAMS, F.R.I.B.A., AND CHARLES HOLDEN, A.R.I.B.A., ARCHITECTS.

ront block, comprising the administration offices, he college library, and various classrooms, has not et been erected.

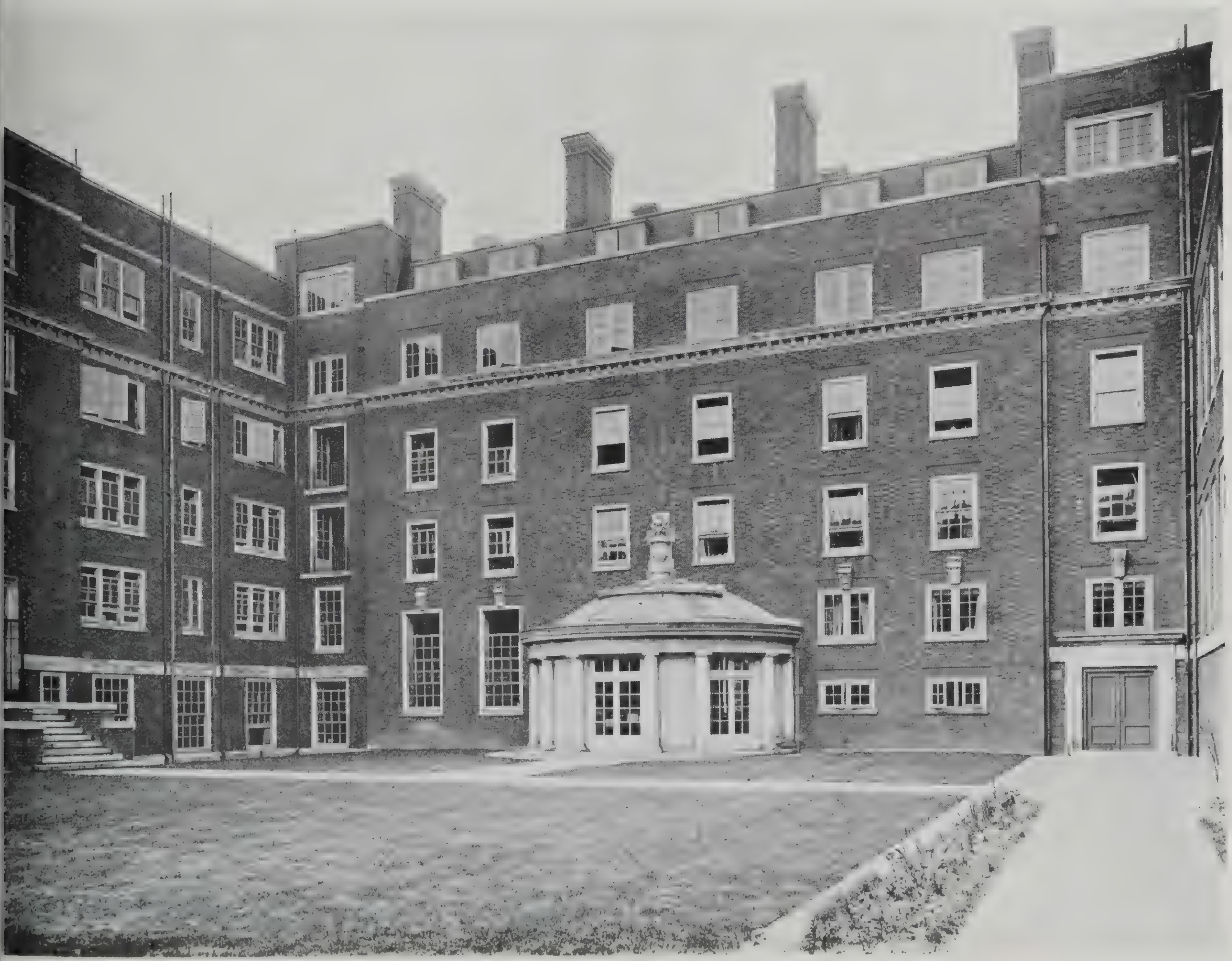
In the refectory the architects have had their hief opportunity for interior design. It is a room neasuring about 75 ft. by 35 ft., covered by a arrel ceiling (in reinforced concrete) and lighted y French windows and by clerestory windows. A ange of columns extends down each side, and at ne end is a slightly raised platform for the high able. Considerable refinement is displayed in the rchitectural treatment of this interior.

With regard to the furnishing of the building gene-ally, it may here be noted that the aim has been to ombine sound construction with elegance of form, nd the result is wholly satisfactory. The tables and hairs are able to stand any amount of handling, yet re not at all cumbersome. They follow on the sound nglish tradition of the eighteenth century, and as xamples of modern furniture-making are a credit to hose who were responsible for their production.

To the left of the entrance hall are the kitchen ffices, and beyond these, on the west side of the uadrangle, are a series of rooms which are quite nique. They comprise a large teaching kitchen in he centre, with a teaching pantry, a teaching scullery, a teaching larder, and a teaching laundry in conjunction. These rooms are equipped with every kind of apparatus and fitting for cooking and other domestic work, and practical instruction and demonstration is given in them. The kitchen, for instance, has different types of stoves for cooking by gas, coal, and electricity; there are meters with glass fronts, through which the working of the apparatus may be studied; there are two long benches with tiled tops and with sheet-iron recesses covered by grids in which gas burners are fitted; and other apparatus appurtenant to modern methods of cooking. In the teaching scullery one finds a similar complete equipment, while in the teaching laundry are appliances for ironing by gas and electricity, washing machines, mangles, etc. The floors of all these rooms, like the working kitchen offices themselves, are laid with red quarries, the walls having a dado of white tiles, finished above with white distemper. Everything is of excellent quality and finish.

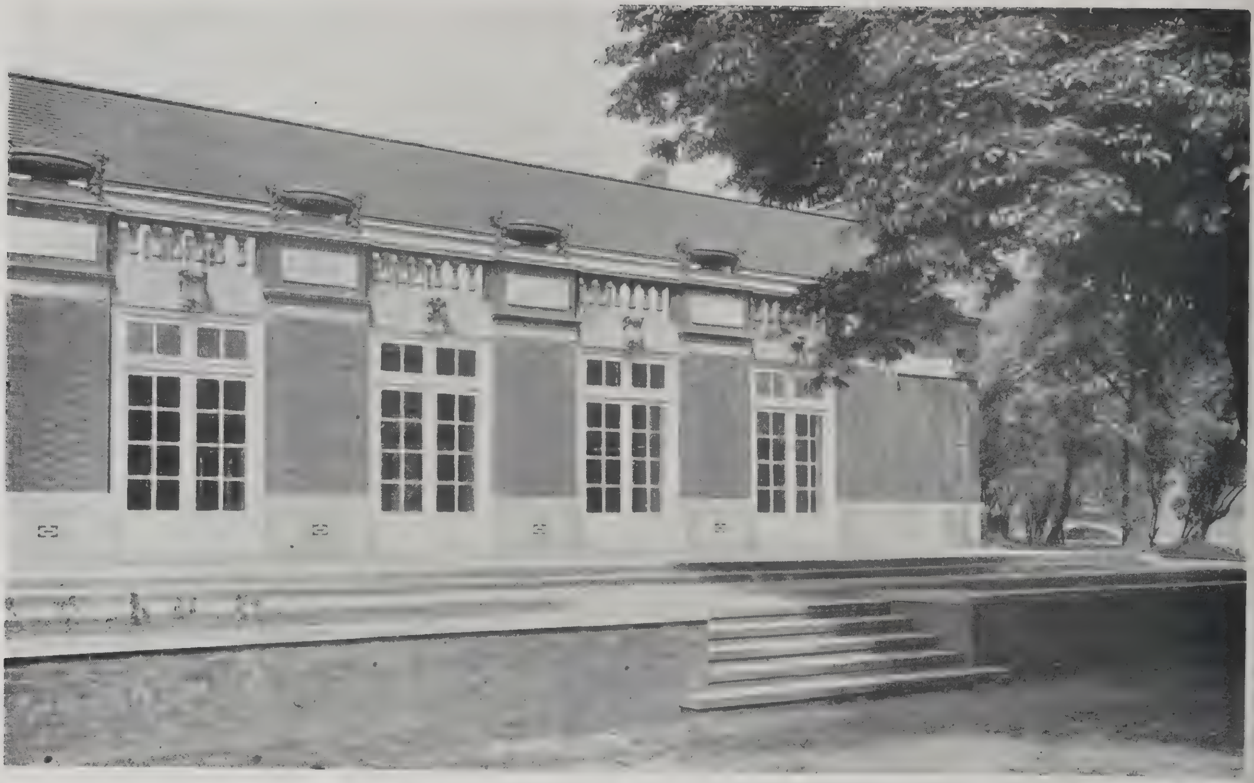
The hostel proper is installed in the south and west blocks. There are fifty-seven bed-sitting-rooms, to each of which a dressing-room is attached, the remainder of the hostel being occupied by the common-rooms, isolation-rooms, and administration offices.

The laboratories block is on the north side of the quadrangle. On the ground floor are four large

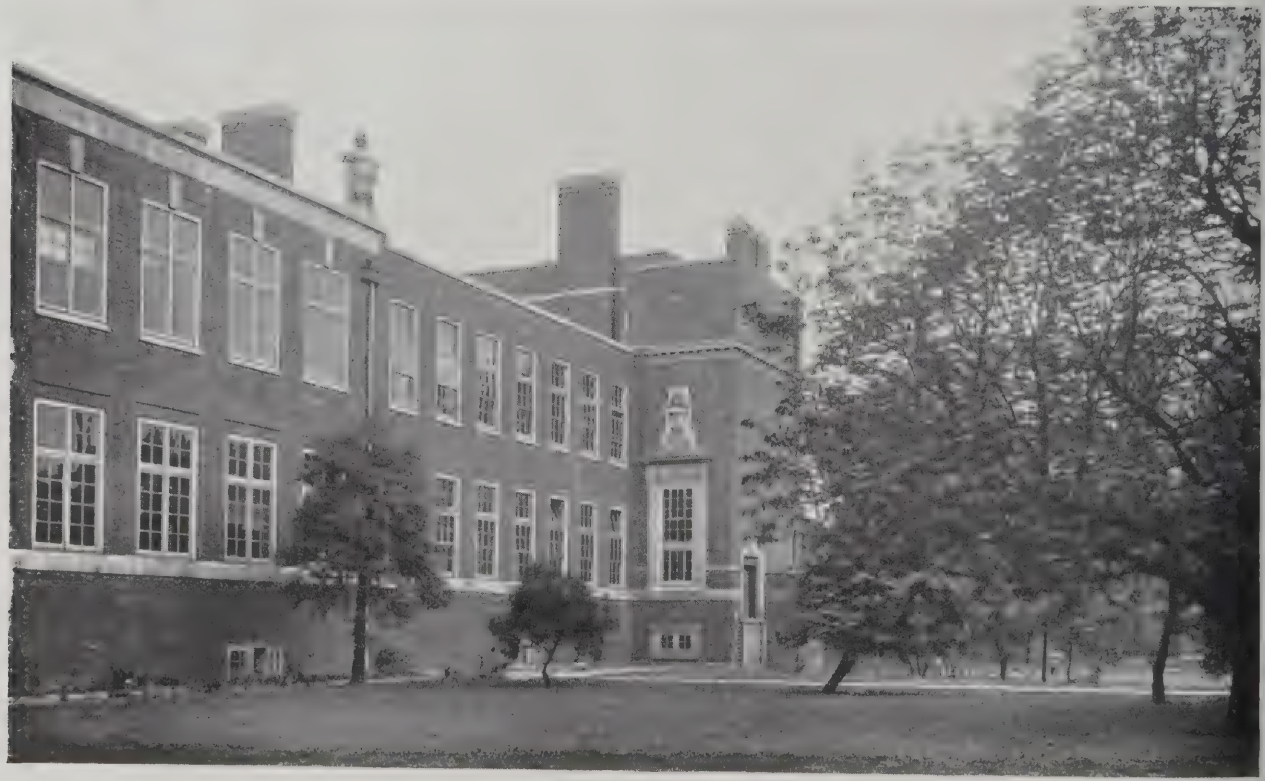


KING'S COLLEGE FOR WOMEN, CAMPDEN HILL, KENSINGTON, LONDON: VIEW IN QUADRANGLE

H. PERCY ADAMS, F.R.I.B.A., AND CHARLES HOLDEN, A.R.I.B.A., ARCHITECTS.



South Side of Refectory.



Laboratory Building, looking North-east.

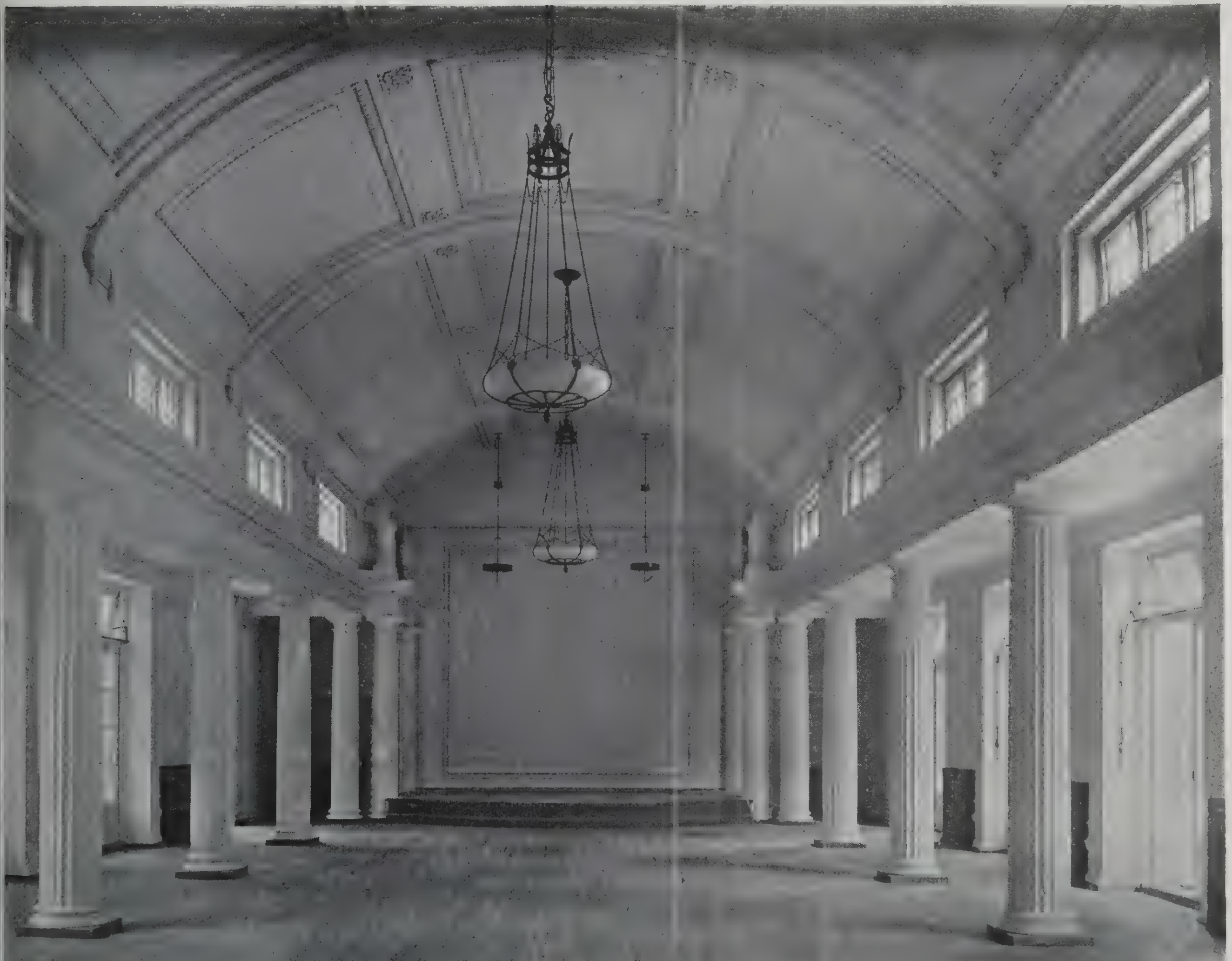
KING'S COLLEGE FOR WOMEN (UNIVERSITY OF LONDON), CAMPDEN HILL, KENSINGTON, LONDON.
H. PERCY ADAMS, F.R.I.B.A., AND CHARLES HOLDEN, A.R.I.B.A., ARCHITECTS.

ratories for physics, physiology, bacteriology,
hygiene respectively, and in connection with
m a lecture theatre, a research-room, prepara-
rooms, and lecturers' rooms; the first floor
g mostly occupied by chemistry laboratories,
various rooms in connection with them.
se laboratories, in their equipment and finish,
w the same sound construction and careful
ntion to detail which are noticeable throughout
building. The fittings—benches, fume cup-
rds, etc.—are of oak, the bench tops being of
k, and the floors laid with wood blocks.

hemistry and physics will no doubt occupy, in
re, a much larger place in the curriculum of every
ol and college, and it is specially significant that
nce is assuming so important a position in the
cation of women who, having been, through
ional necessity, called upon to take up work which
been hitherto left mainly in the hands of men, and
ing demonstrated the skill and the high intelli-
ce with which women can perform it, will never
in consider it outside their scope. Science, as
ady shown, should, at all events as regards its
nentary principles, form the groundwork of all
cation for girls, even though many of them find no
re ambitious application of it than the betterment
lomestic work. But, beyond that, the war is so sadly
leting the male population that women who have
n trained thoroughly in science will find no difficulty in turning it to professional account. Hence the necessity for providing them, in schools and colleges, with equal opportunities to those afforded the men.

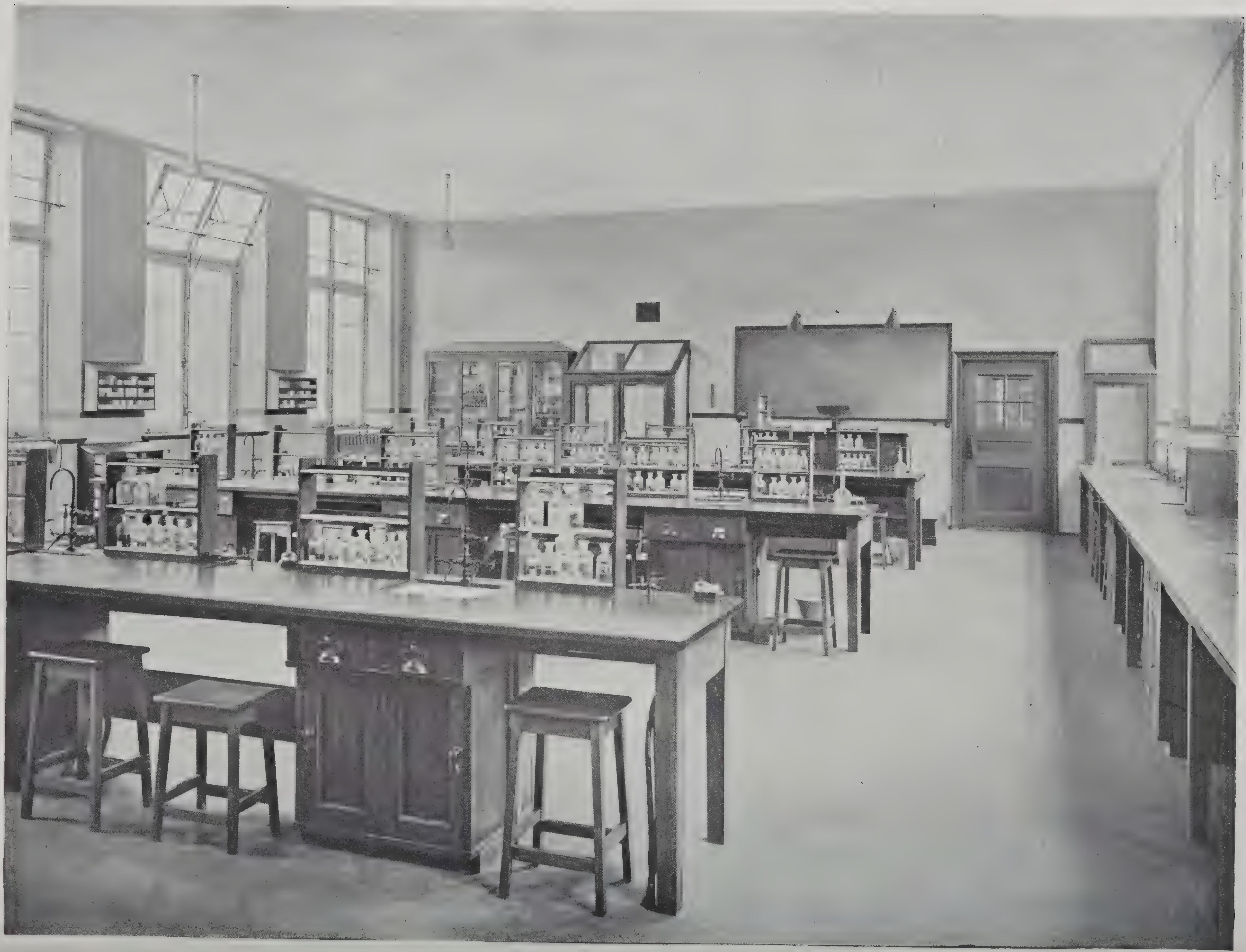
In general architectural character the exterior design of the college is an individual treatment of the Later Renaissance; the refectory, for example, and the main entrance to the hostel, recall Wren's work at Hampton Court; but the whole has been given the touch of a modern artist, and the buildings thereby gain the interest that attaches to all personal work.

The general contractors for the college were Messrs. Wallis and Sons, of Maidstone. Casements were supplied by Messrs. Henry Hope and Sons, Ltd. The electric-light fittings are by Messrs. Faraday and Sons—from Mr. Holden's designs. The cooking and laundry plant was supplied and fitted by Messrs. Fletcher, Russell and Co., Ltd., Messrs. James Slater and Co., and the Gas Light and Coke Co. Tiles were supplied by Messrs. Minton and Co.; sanitary fittings by Messrs. Doulton and Co.; grates by Messrs. Bratt, Colbran and Co. The Gas Light and Coke Co. were responsible for the gas-fitting; Messrs. Rashleigh, Phipps and Co. for the electric wiring; and Messrs. Berry and Sons for the heating apparatus. The decorative plasterwork was executed by the general contractors, Messrs. Wallis, from models prepared by Mr. G. P. Bankart (of Messrs. George Jackson and Sons Ltd.) and Mr. Palliser.



KING'S COLLEGE FOR WOMEN, CAMPDEN HILL, KENSINGTON, LONDON: THE REFECTORY.

H. PERCY ADAMS, F.R.I.B.A., AND CHARLES HOLDEN, A.R.I.B.A., ARCHITECTS.

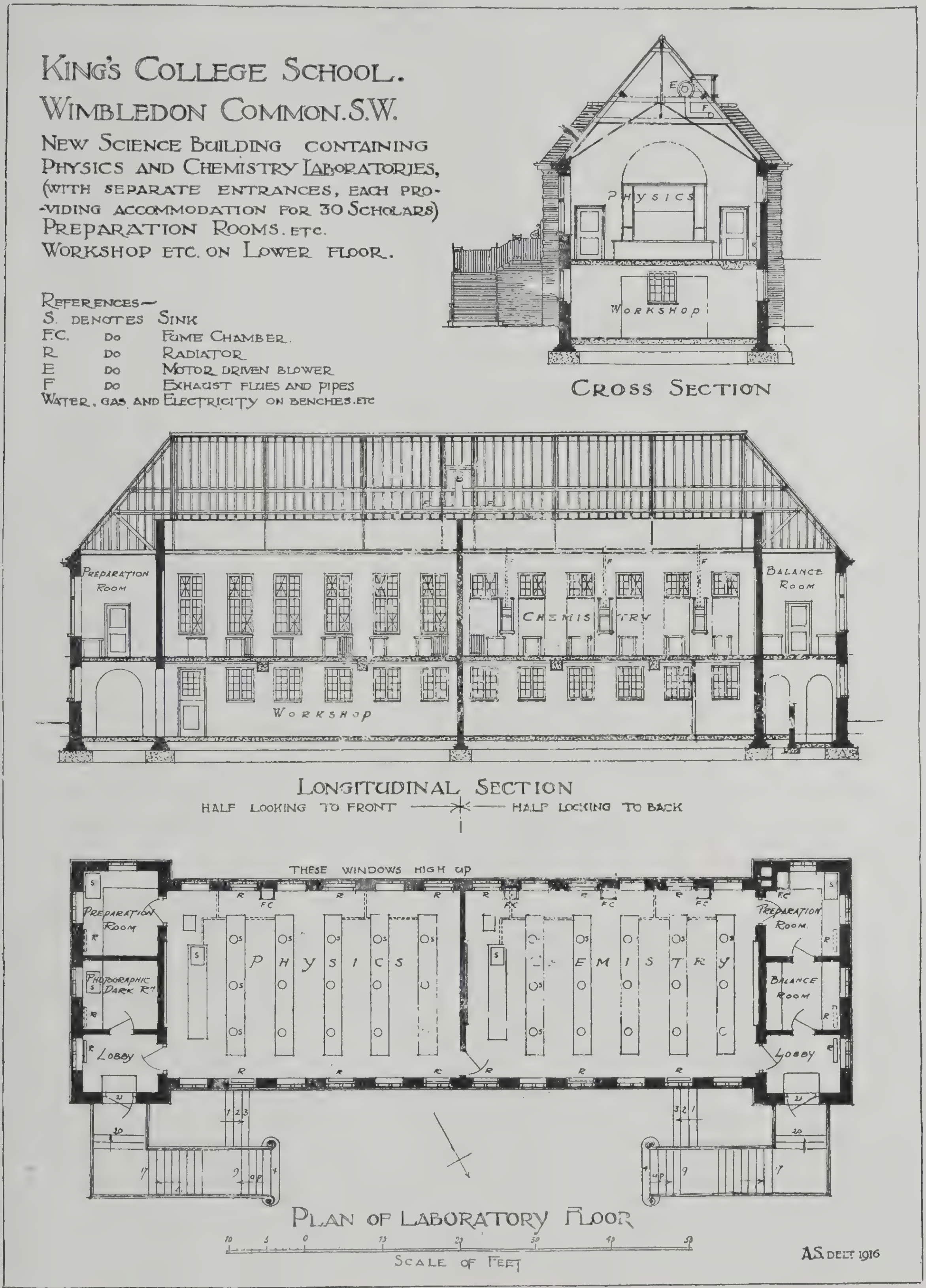


KING'S COLLEGE FOR WOMEN, CAMPDEN HILL, KENSINGTON, LONDON: PHYSIOLOGY LABORATORY.

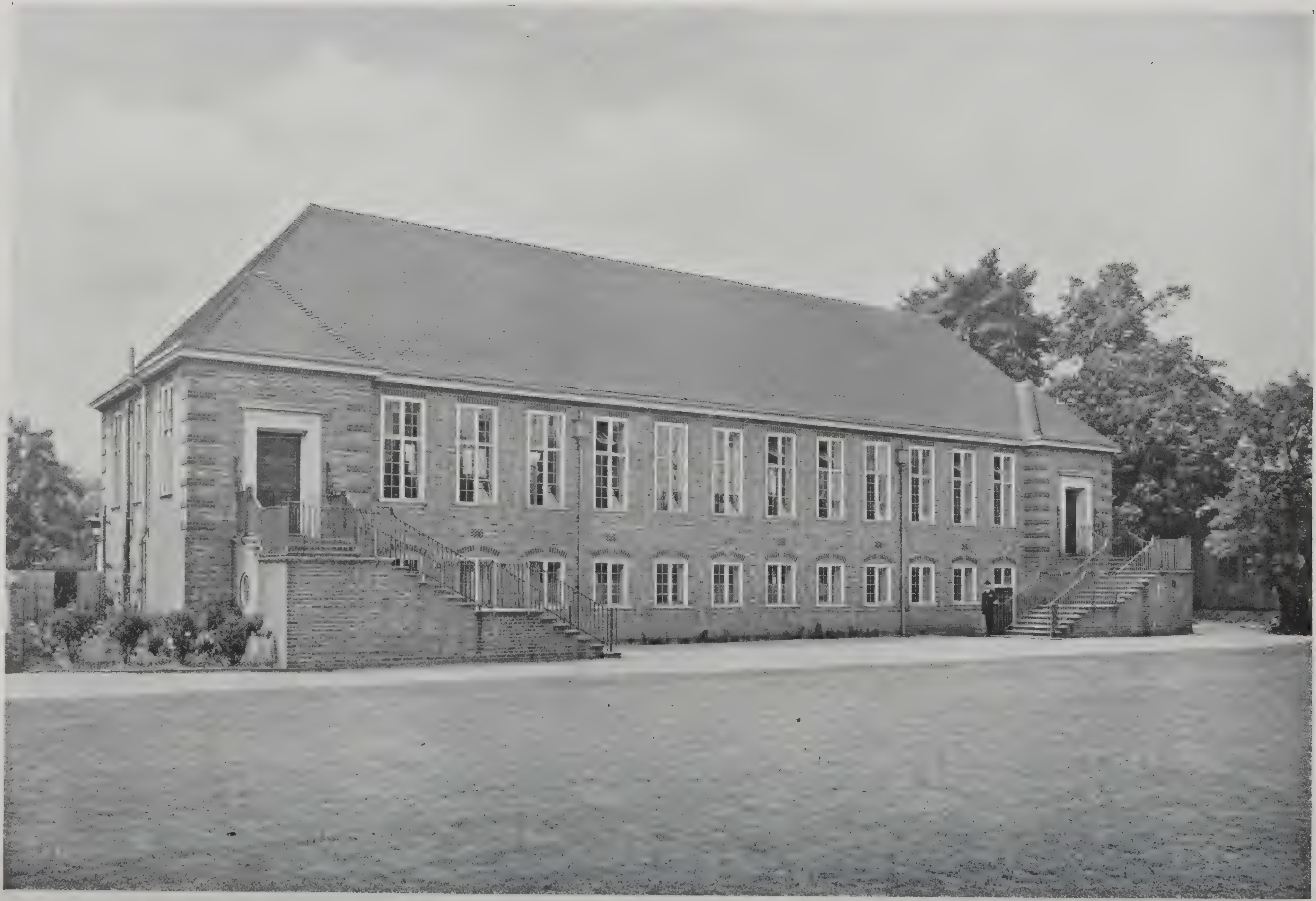
SCIENCE BUILDINGS, KING'S COLLEGE SCHOOL, WIMBLEDON.

THIS is an admirable example of a physics and chemistry building in connection with a large school for boys. The walling is of multi-coloured cing bricks, with bright red quoins and window ches; the doorways and the cornice being of Portland ne. The roof is covered with sand-faced tiles.

It was desired that the physics laboratory should be both a lecture and a demonstration room, and for this reason the benches are arranged and fitted so that the boys all face one way, toward the physics master's lecture bench. The arrangement of the chemistry laboratory is similar. The benches have $1\frac{3}{4}$-in. oiled

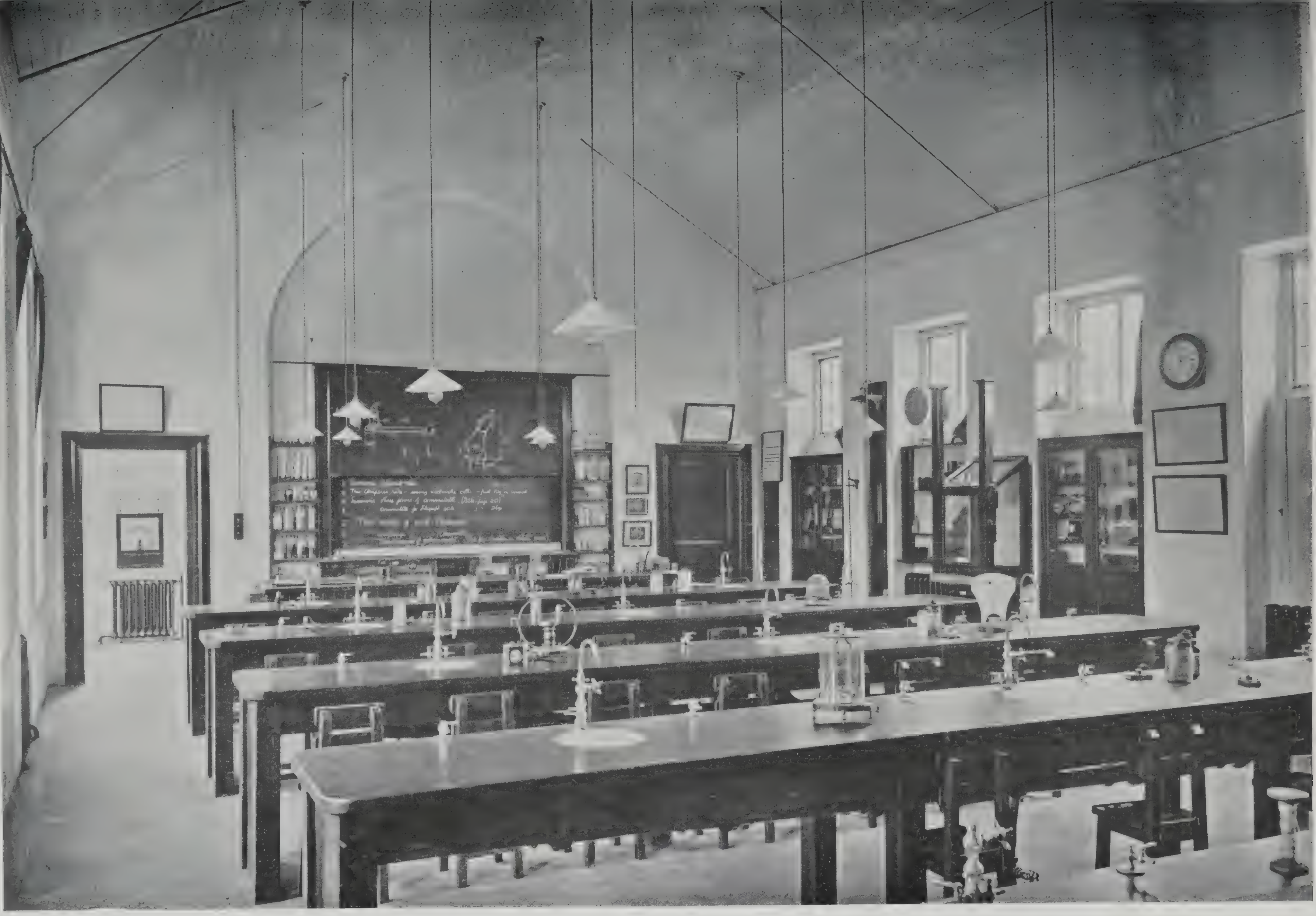


SCIENCE BUILDING, KING'S COLLEGE SCHOOL, WIMBLEDON COMMON, LONDON.
ARTHUR STRATTON, F.S.A., F.R.I.B.A., ARCHITECT.



SCIENCE BUILDING, KING'S COLLEGE SCHOOL, WIMBLEDON COMMON, LONDON.

ARTHUR STRATTON, F.S.A., F.R.I.B.A., ARCHITECT.



PHYSICS LABORATORY. SCIENCE BUILDING. KING'S COLLEGE SCHOOL. WIMBLEDON COMMON. LONDON.

ARTHUR STRATTON. F.S.A.. F.R.I.B.A.. ARCHITECT.

teak tops, and the sinks, provided at regular intervals, are of the round variety, which can be cleaned with a minimum of labour.

Glazed channels with acid-proof joints, laid to falls in the thickness of the floor and accessible for cleaning, carry the wastes to two outlets in each laboratory, as shown by the dotted lines on the plan.

Gun-metal, swan-neck, water-taps are fitted to receive rubber tubing, and at the base of each are two small taps, for condenser and other work. The drawers in the lecture benches, and the cupboard and shelving around the walls, provide for systematic storage of apparatus and material.

The fume cupboards have a sliding sash in front, an acid-resisting stone base, and a slate plinth against the wall. The fumes are drawn off by an electric blower in the roof, and discharged through a louvred dormer, as seen in the sections.

The floors are of reinforced concrete, laid with wood blocks, except in the lobbies, where they are of Durazzo, with sinkings for doormats.

Adjacent to the physics laboratory are a preparation room and a balance room (equipped with a Fletche heater for hot water), and a photographic dark room and adjacent to the chemistry laboratory are a preparation room and a balance room, the latter having thick stone bench, supported so as to protect the mor delicate balances from vibration.

Each laboratory accommodates thirty boys. Lighting is by electricity, and the switches are arranged so that the lights can be turned out simultaneously from the lecture bench, thus saving time and trouble when the laboratory is desired to be darkened for lantern work; curtains are fitted to the inside of the window reveals, and thus enable light to be excluded, while admitting abundance of fresh air.

For experiments in photometry, electrolysis, and various other branches of science, current is laid on to every bench in the physics laboratory.

The general contractors for the building were Messrs. William Moss and Sons, Ltd., of Loughborough and London, who also carried out the reinforced concrete floors on their own system.

CHEMISTRY LABORATORIES, UNIVERSITY COLLEGE, LONDON.

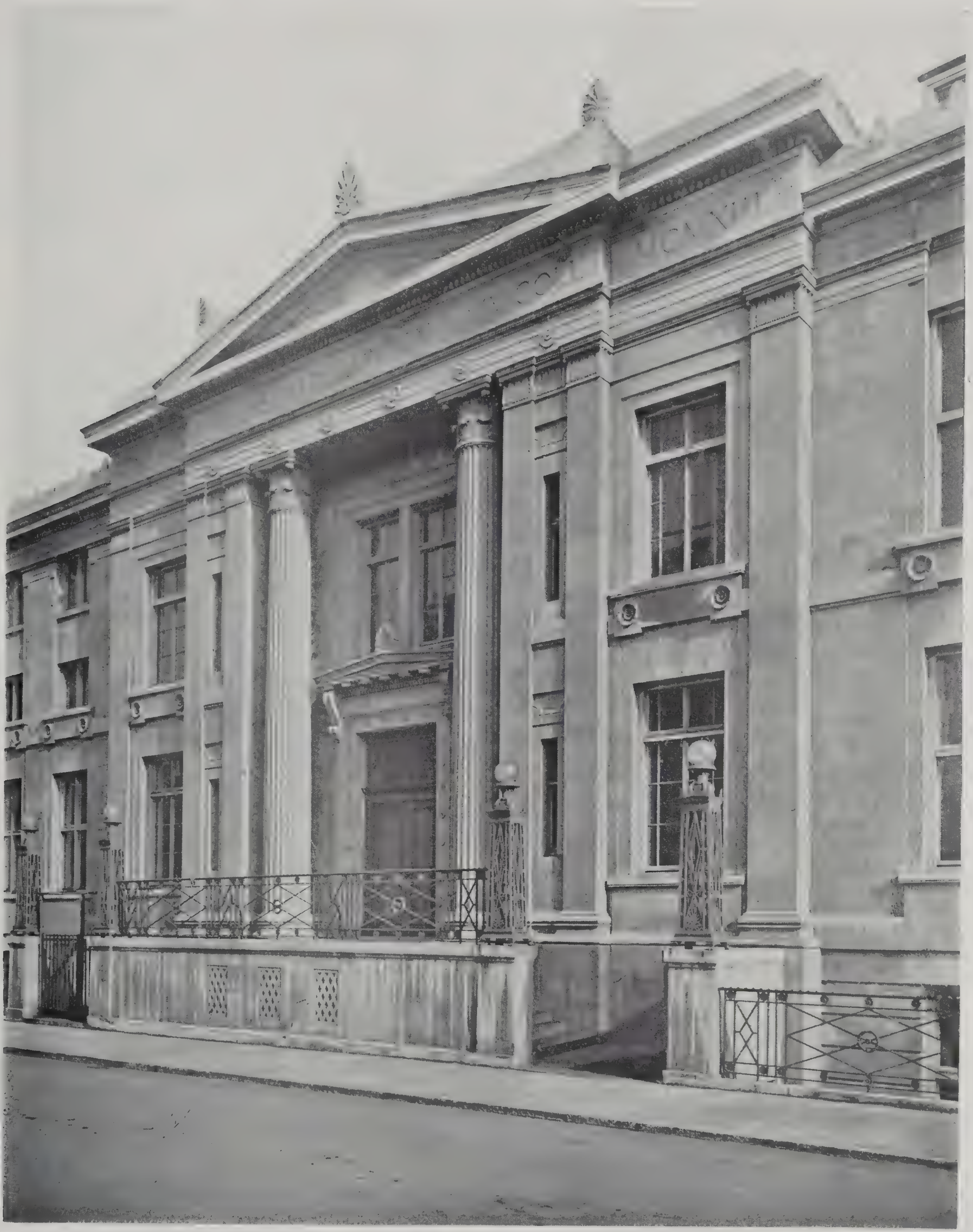
THE new chemistry laboratories at University College, Gower Street, London, have been erected on a site immediately to the north of the main College buildings. The front to Gower Place is 315 ft. in length. The planning of the interior was settled by the architect, Professor F. M. Simpson, F.R.I.B.A., in consultation with members of the chemistry staff, who had beforehand made a tour of inspection of the chief modern laboratories at home and abroad. The laboratories at University College may therefore be regarded as embracing the most modern ideas in arrangement and equipment.

The building comprises a half-basement, ground, first, and second floors. The western portion of this floor is occupied by the laboratories and research rooms for physical chemistry. At the eastern end is a room, about 50 ft. square, supplied with gas, water, steam, compressed air and drainage, for the experimental electrical plant. Adjoining this room is a well-fitted workshop for the construction of apparatus for the departments of chemistry and physics and for the use of students. On the same floor are rooms for the production of liquid air and hydrogen for low-temperature research, and for the main chemical stores.

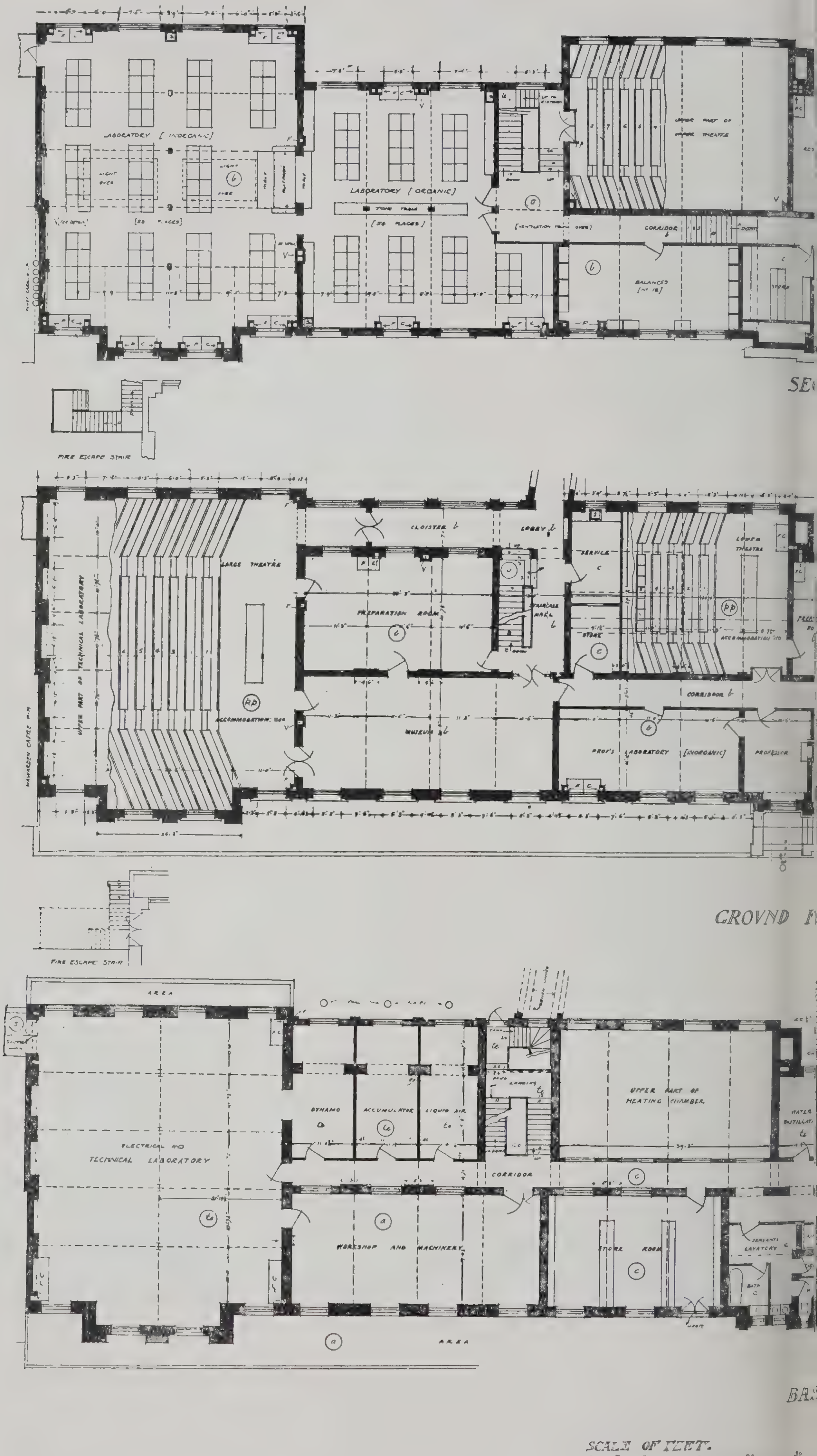
On the ground floor are two lecture theatres and preparation rooms, the library, the private room and laboratory of the Professor of Inorganic and Physical Chemistry (Dr. F. G. Donnan, who succeeded Sir William Ramsay in 1913), the main inorganic laboratory for second-year students, with rooms adjoining for operations involving noise or fumes, for balances, and a store for the chemicals needed on this floor. The laboratory and the balconies have special fan ventilation. The tops of the benches are of unglazed, highly compressed tiles, which are fire-proof; they are easily kept clean and do not increase the breakages, as was feared. Beyond this laboratory is a group of research rooms for the assistant members of the staff and for research students. On the first floor are the private room and laboratory of the Professor of Organic Chemistry (Dr. Norman Collie, who has occupied the Chair since 1902 and is Director of the Laboratories), the organic laboratory, combustion room, and balance room, at one end, and a group of research rooms at the other, as well as the organic theatre, the organic chemical stores, an apparatus store, a dark room, a spectroscope room a service room, and lavatories. On the second floor are the laboratory for first-year students (providing bench accommodation for one hundred to work at a time), the Department of Pathological Chemistry, and six rooms for general chemical research.

The building has three staircases—the main one in the centre of the building, one at the extreme west end, connecting the research rooms, and the other at the end of the bridge, over Little Gower Place, which connects the new building to the old College buildings. The three lecture theatres and the first-year laboratory open on to the last staircase. By this means the larger portion of the traffic of the building and the attendant dust is kept to one staircase, and to the one furthest removed from the part of the building devoted to advanced work and research. There is also an external fire-escape staircase, serving the back of the theatre and the large laboratory on the top floor at the east end. The general ventilation of the building is controlled by four separate fans, the flues from each room running to a main duct in the roof. The laboratories and research rooms have glazed brick walls; they are amply supplied with fume cupboards, which are ventilated by separate flues in which the draught is created by gas-flames. Round the walls of the research rooms are teak ledges carrying gas, water, waste, and compressed air.

The general contractors were Messrs. Dove Bros., Ltd., of London. Dadoes were supplied by Messrs. Art Pavements, Ltd., of London, and lifts by Messrs. Waygood-Otis, Ltd., of London.

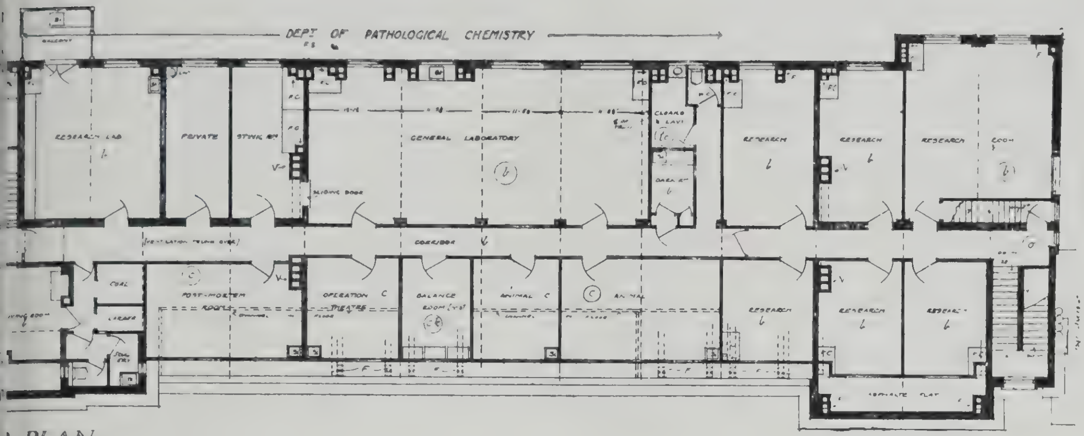


CHEMISTRY BUILDING, UNIVERSITY COLLEGE, LONDON: MAIN ENTRANCE, GOWER PLACE.
PROFESSOR F. M. SIMPSON, F.R.I.B.A., ARCHITECT.

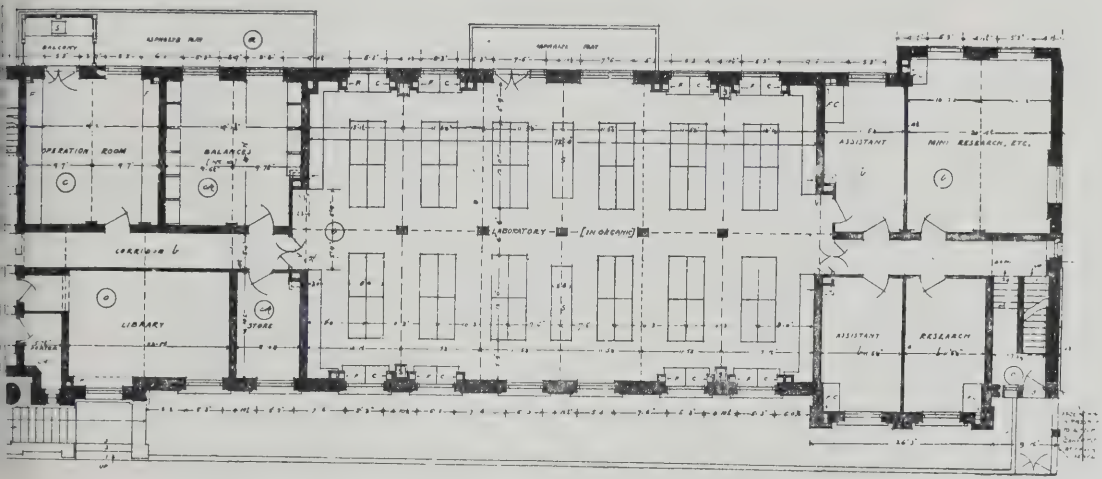


CHEMISTRY BUILDING, UNIV

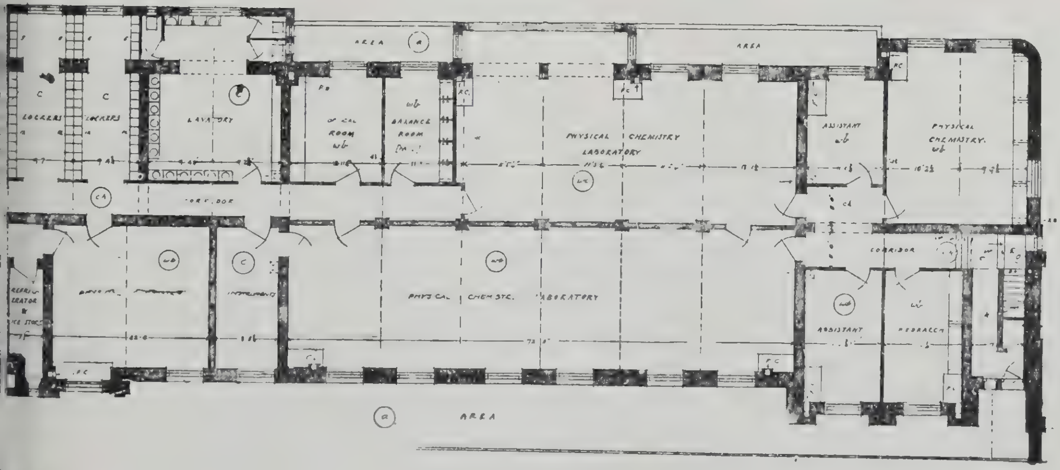
PROFESSOR F. M



PLAN.



ZZANINE PLANS.



AN.

GE, GOWER STREET, LONDON.

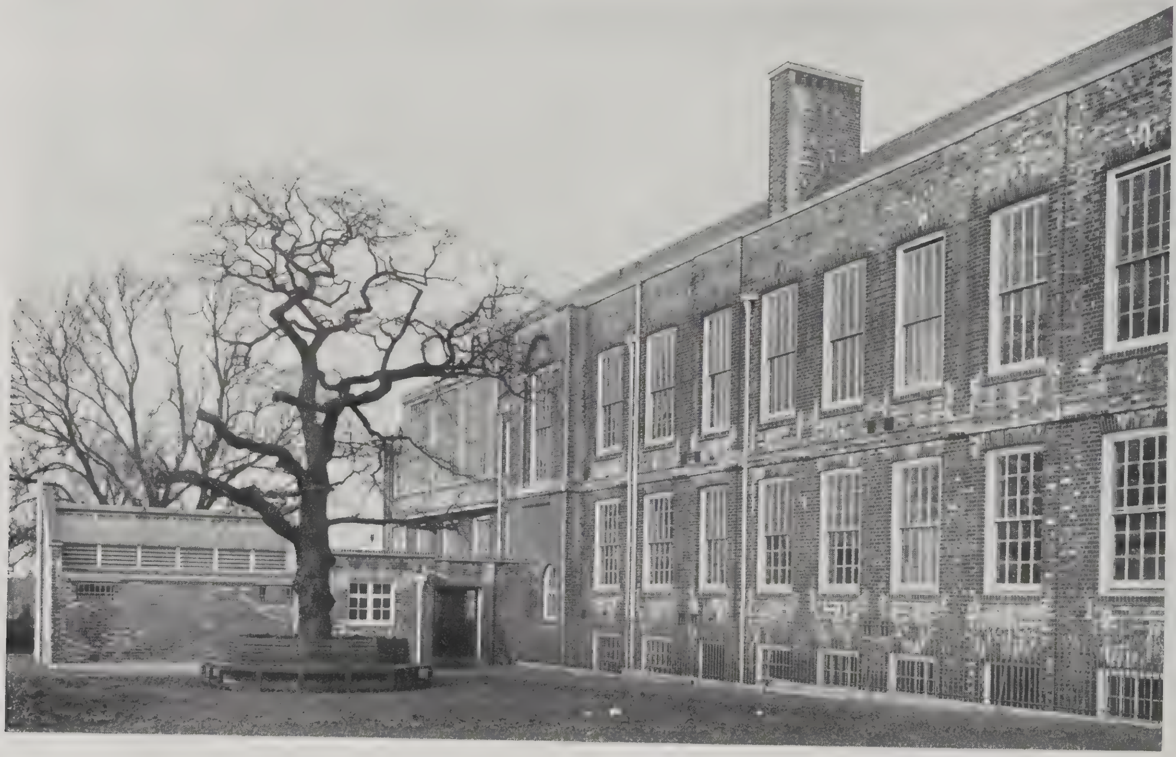
R.I.B.A., ARCHITECT.

II.—SECONDARY AND ELEMENTARY SCHOOLS.

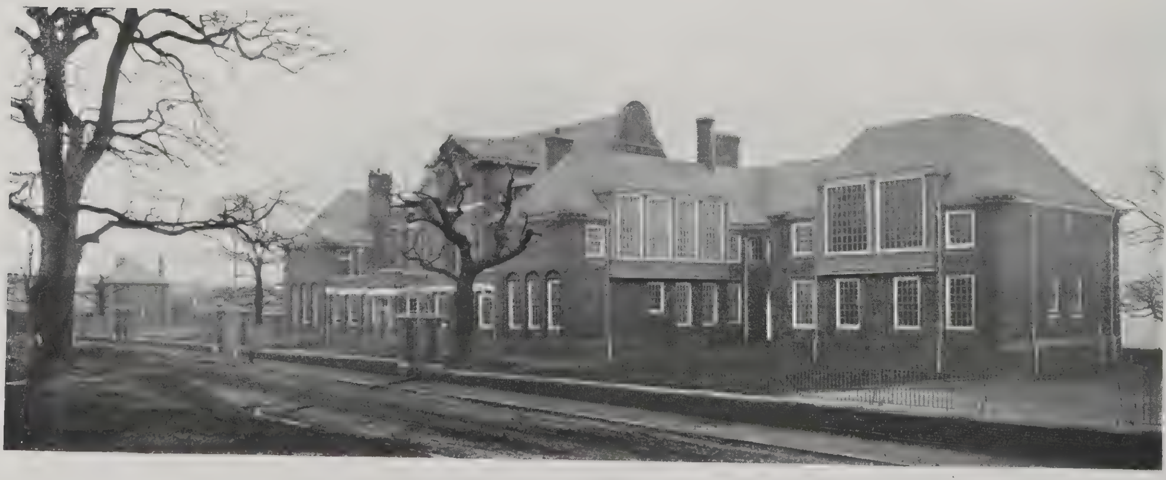
FURZEDOWN SECONDARY SCHOOL FOR GIRLS, TOOTING.

THIS school forms a portion of an educational centre, comprising training college and hostel and secondary and elementary schools. It is situated on the Furzedown Estate, Tooting, the whole area comprising 13 acres. The land allocated to the secondary school is 3-2/3rd acres in extent, and provides ample space for recreation and horticultural instruction for the students. Tar-paved courts are laid out for tennis and other games.

The buildings are of red brick with stone dressings,



Rear Elevation.

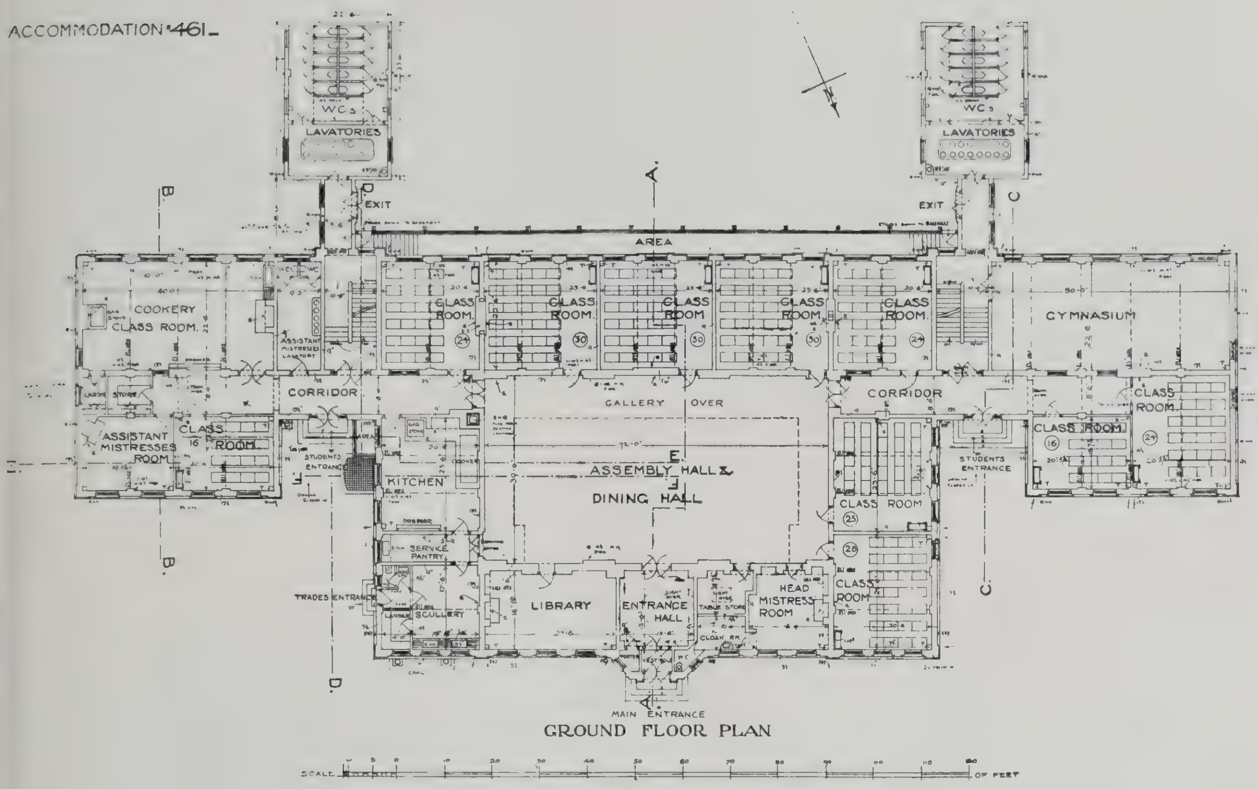


Front Elevation.

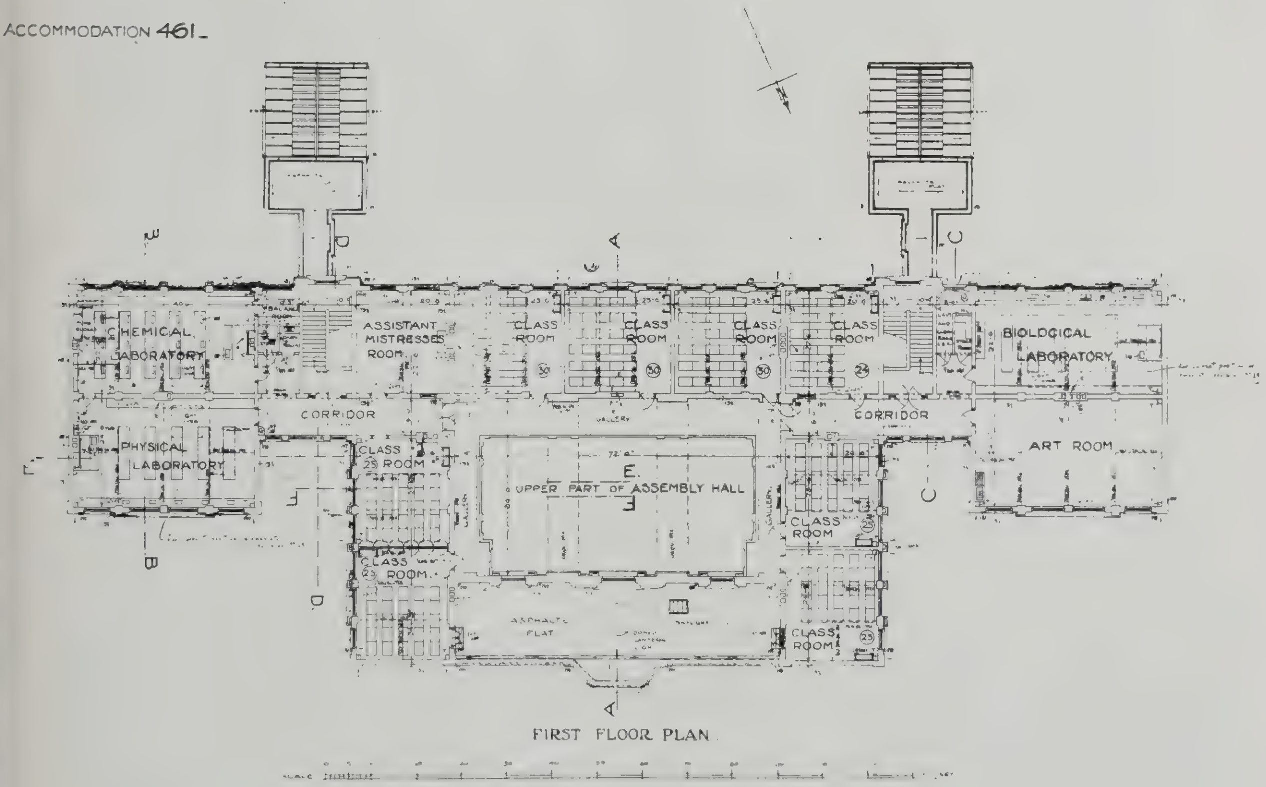
FURZEDOWN SECONDARY SCHOOL FOR GIRLS, TOOTING, LONDON.

W. E. RILEY, F.R.I.B.A., ARCHITECT.

(Superintending Architect to the L.C.C.)



GROUND FLOOR PLAN



FIRST FLOOR PLAN

FURZEDOWN SECONDARY SCHOOL FOR GIRLS, TOOTING, LONDON.

W. E. RILEY, F.R.I.B.A., ARCHITECT.

(Superintending Architect to the L.C.C.)

and are roofed with green Westmoreland slates; all floors are of fire-resisting materials. The ground floor comprises entrance-hall, assembly-hall (which is also used as a dining-room), gymnasium, cookery-room, ten classrooms, accommodating 247 students, library, mistresses' rooms, kitchen, scullery, etc.

The first floor comprises eight classrooms, accommodating 214 students, chemical, physical, and biological laboratories, and art room, each accommodating thirty students.

Owing to the levels of the site, an opportunity was afforded of placing the cloaks in a half-basement; they are approached from the two main staircases, and are adjacent to the students' entrances. The sanitary blocks are in duplicate, and are detached from the main building by covered ways; they are axial with the students' entrances, and afford exits to the playground.

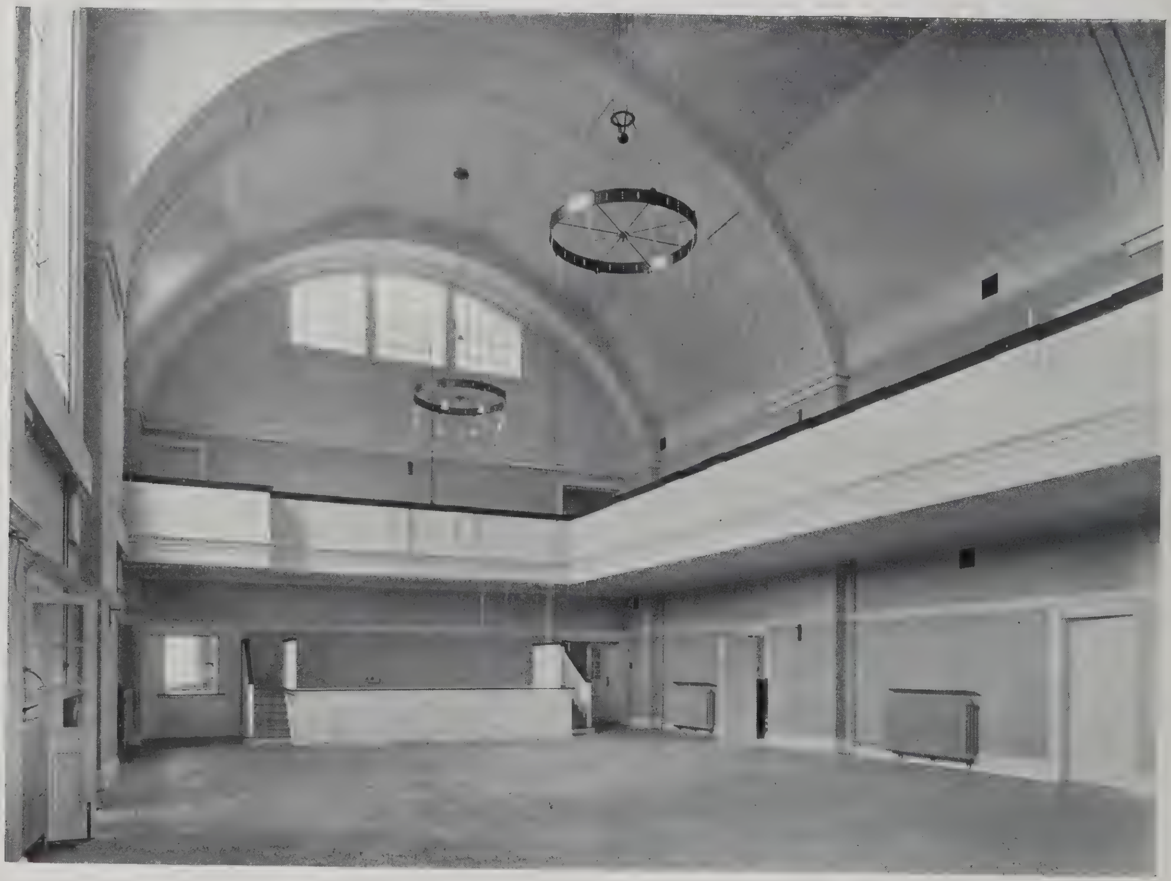
A feature has been made of the assembly hall, which is carried up the height of the building, and has a gallery around three sides. This serves as a corridor on the first floor.

Glazed tile dadoes have been provided to all teaching rooms and staircases; the walls above, relieved with a frieze rail, are plastered and distempered. A caretaker's house and cycle shed are provided apart from the school building. The contractors were Messrs. Holliday and Greenwood, Ltd., of Loughborough Park Works, Brixton.

BEXLEY WELLING COUNCIL SCHOOL, KENT.

THIS school accommodates 250 infants in five classrooms, and contains an assembly hall, which, well cut off from the classrooms, is used for marching and singing. Ample cloak room accommodation is provided, and there is a room for teachers' use and for periodical medical examinations.

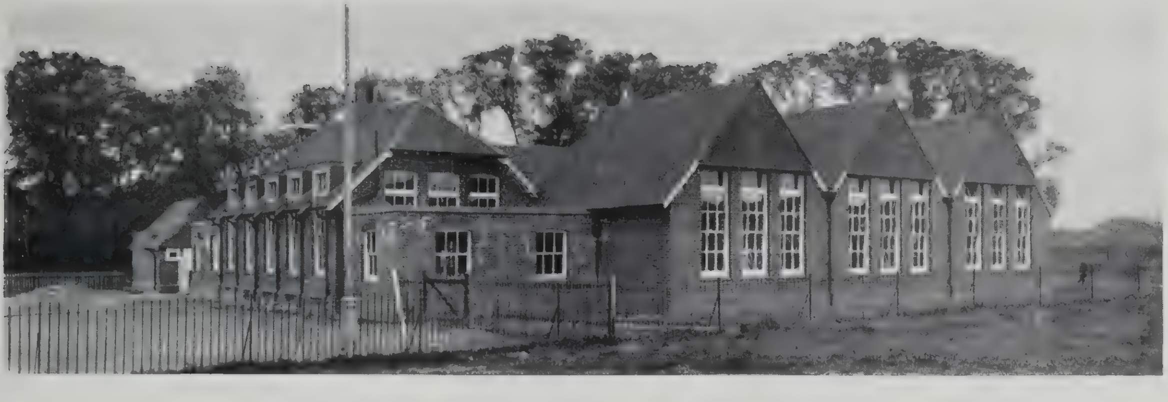
The school generally is heated on the low-pressure hot water system, and, in accordance with the usual practice, this means of heating is supplemented by an open fire in the babies' room. This school adjoins one that was erected a few years earlier; and the two combined accommodate more than 600 children.



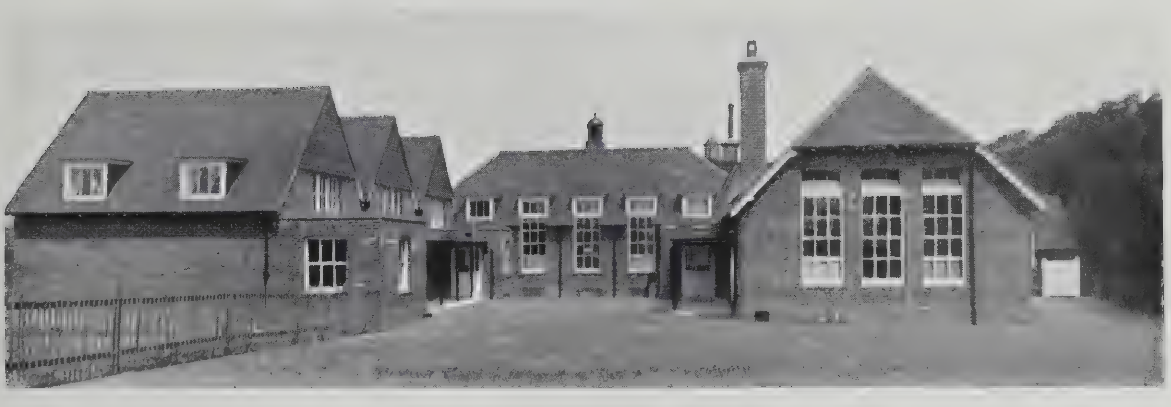
FURZEDOWN SECONDARY SCHOOL FOR GIRLS, TOOTING, LONDON: VIEW IN ASSEMBLY AND DINING-HALL.

W. E. RILEY, F.R.I.B.A., ARCHITECT.

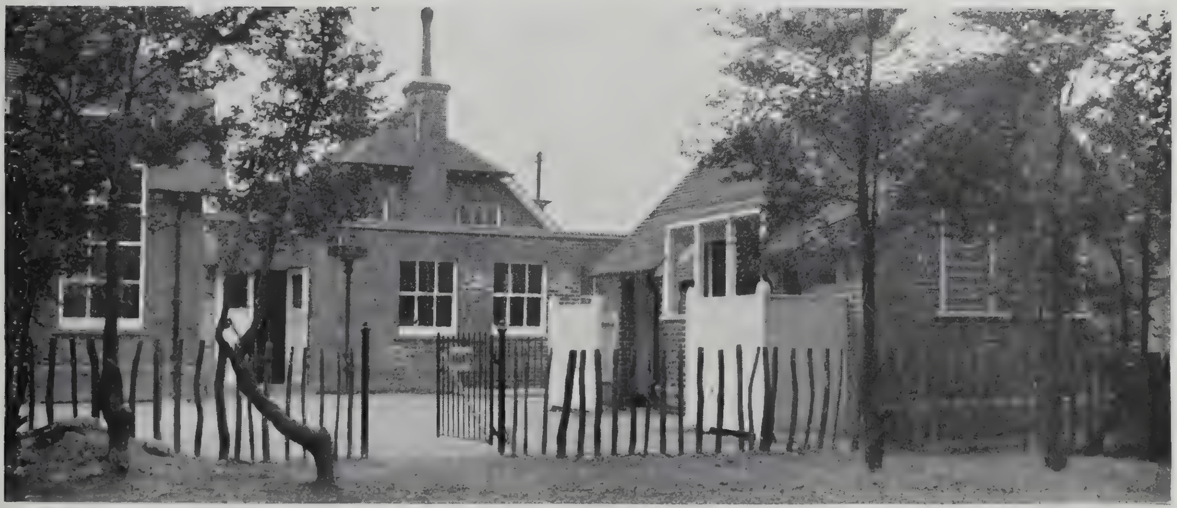
(Superintending Architect to the L.C.C.)



View of North and West Elevations.



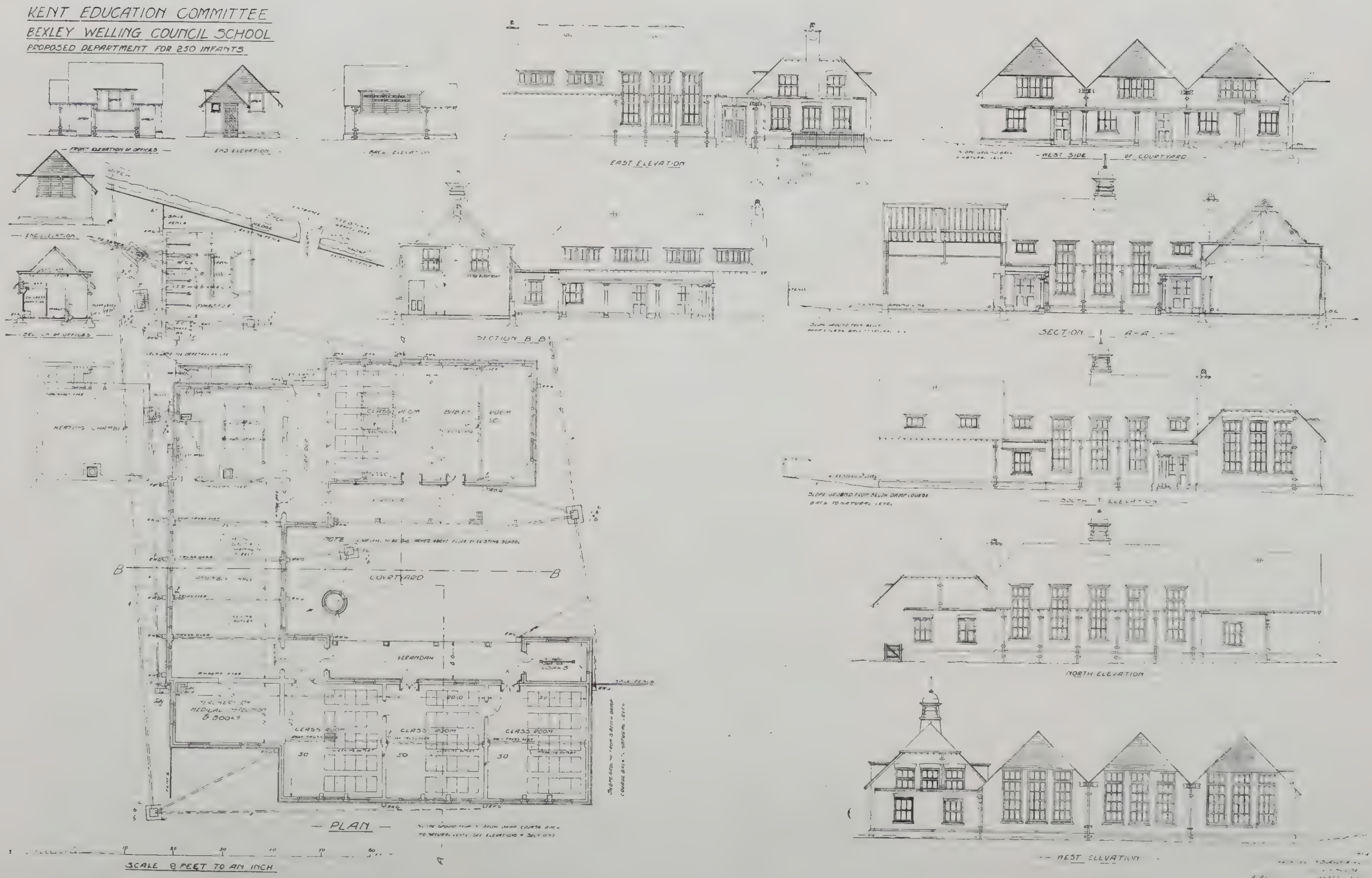
View Looking towards Courtyard.



View of Cloakroom and Latrines.

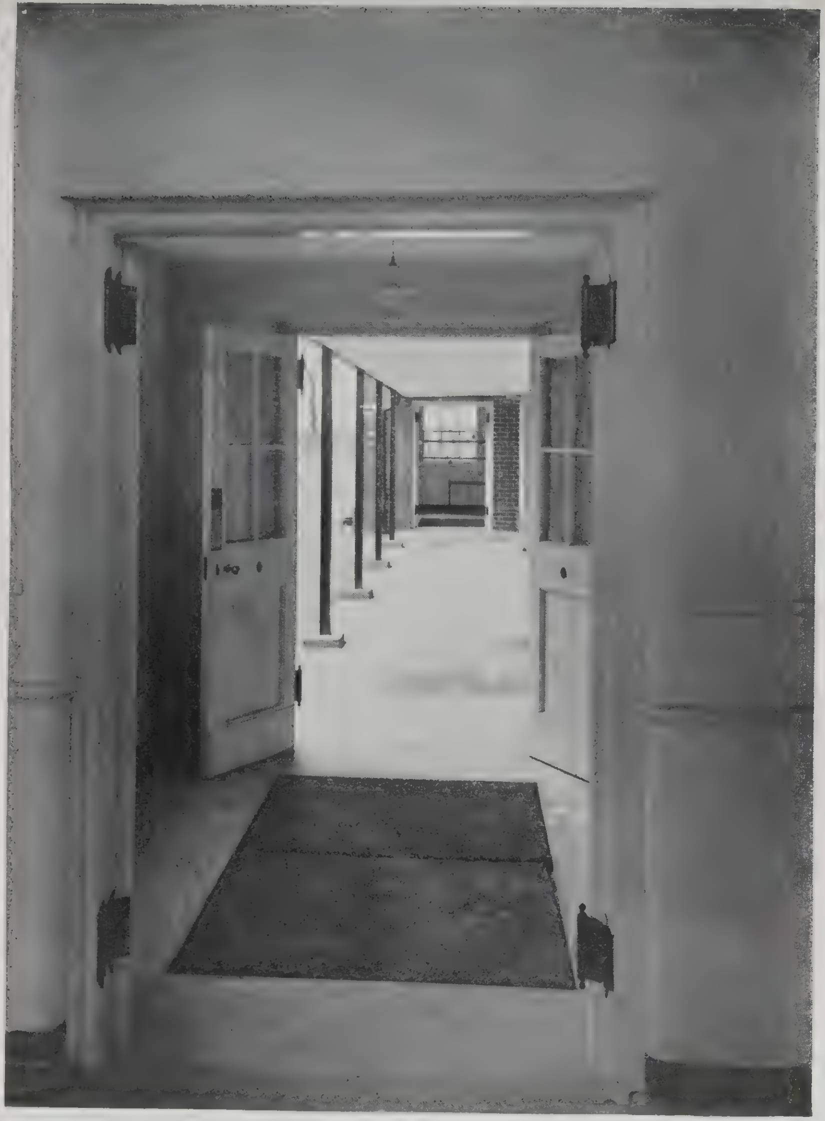
BEXLEY WELLING INFANTS' SCHOOL, KENT.

WILFRID H. ROBINSON, M.S.A., COUNTY EDUCATION ARCHITECT.

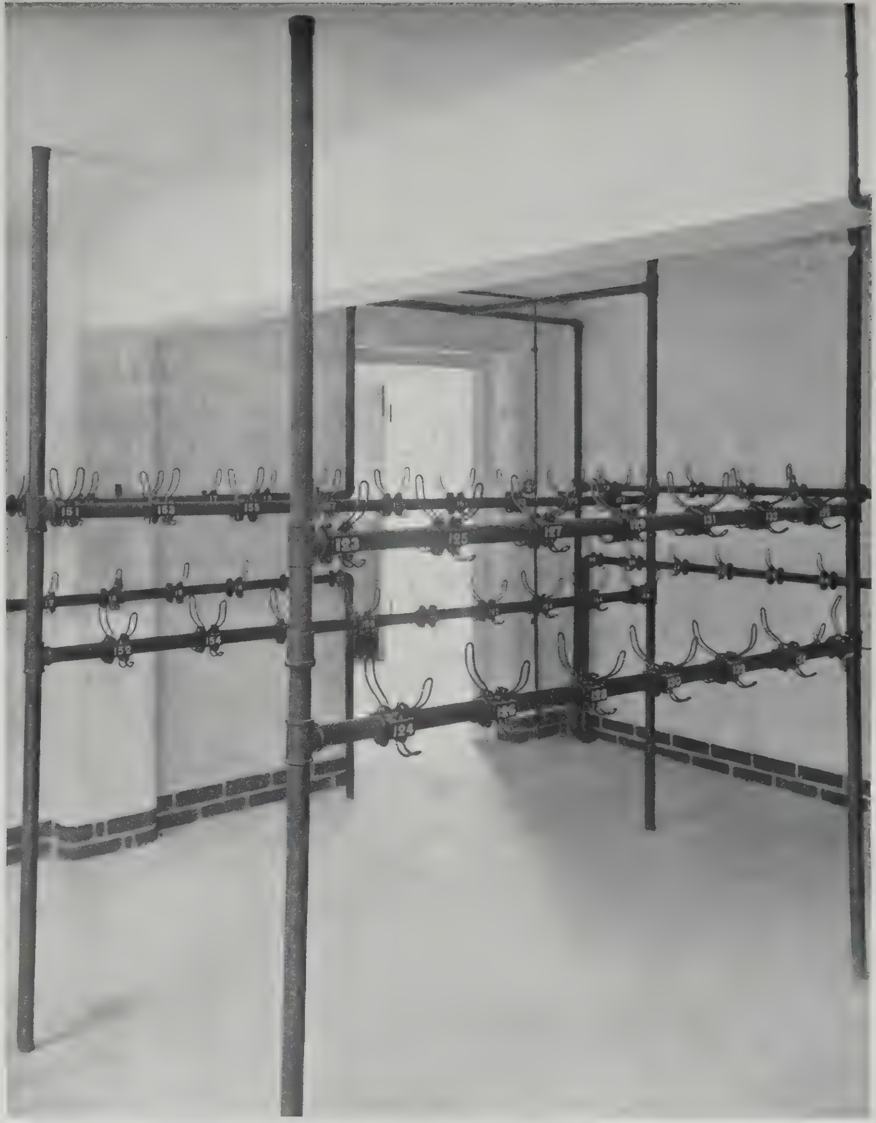


BEXLEY WELLING INFANTS' SCHOOL, KENT.

WILFRID H. ROBINSON, M.S.A., COUNTY EDUCATION ARCHITECT.



View looking towards Verandah.



Cloakroom Fixtures.

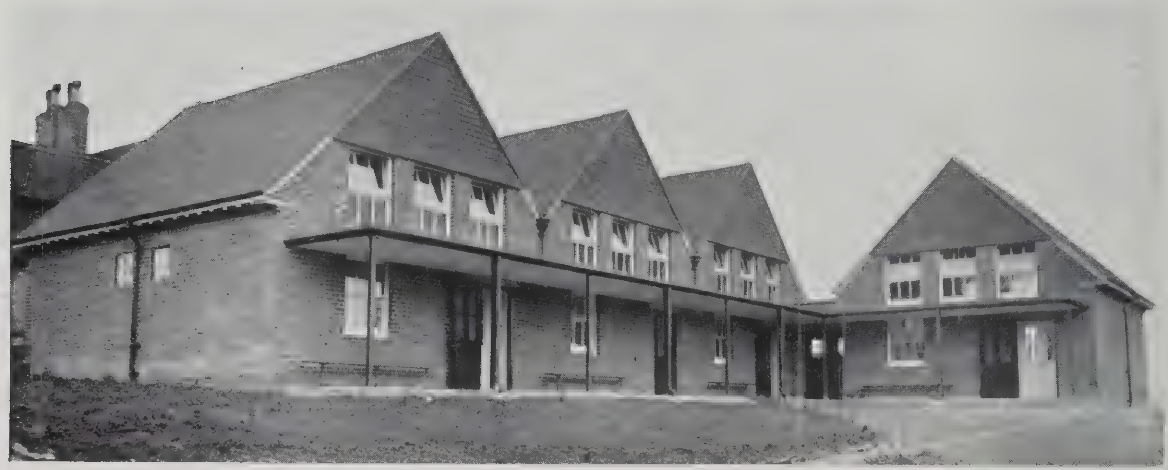
BEXLEY WELLING INFANTS' SCHOOL, KENT.

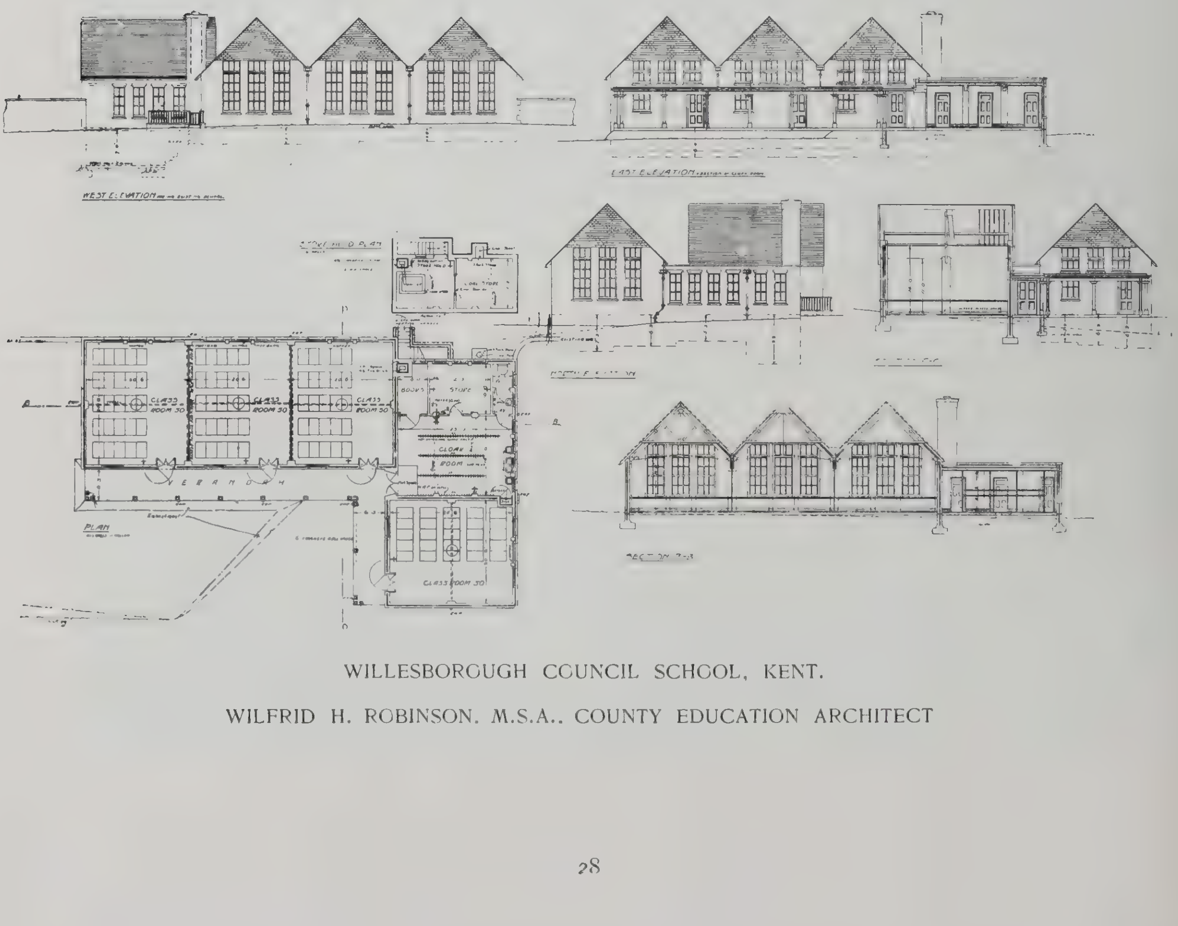
WILFRID H. ROBINSON, M.S.A., COUNTY EDUCATION ARCHITECT.

WILLESBOROUGH COUNCIL SCHOOL, KENT.

THIS school is of the verandah type, the object being to obtain thorough cross-ventilation and the maximum amount of light and sunshine. Accommodation is provided for 200 boys. The building is faced with local red bricks, with a blue vitrified brick plinth, and the roofs are covered with local sand-faced dark brown tiles. The verandah is constructed of steel stancheons, and has a reinforced concrete roof, which is covered with asphalte. The school is heated by low-pressure hot water, infants' rooms having ope fireplaces in addition.

As we have observed in the preface to this series o illustrations of various types of schools, what is terme the "science" of school building has been largel evolved—and necessarily so—from the vast amount o experience accumulated in building elementar schools, which, of course, far outnumber those of a different class. Elementary schools of modern desig

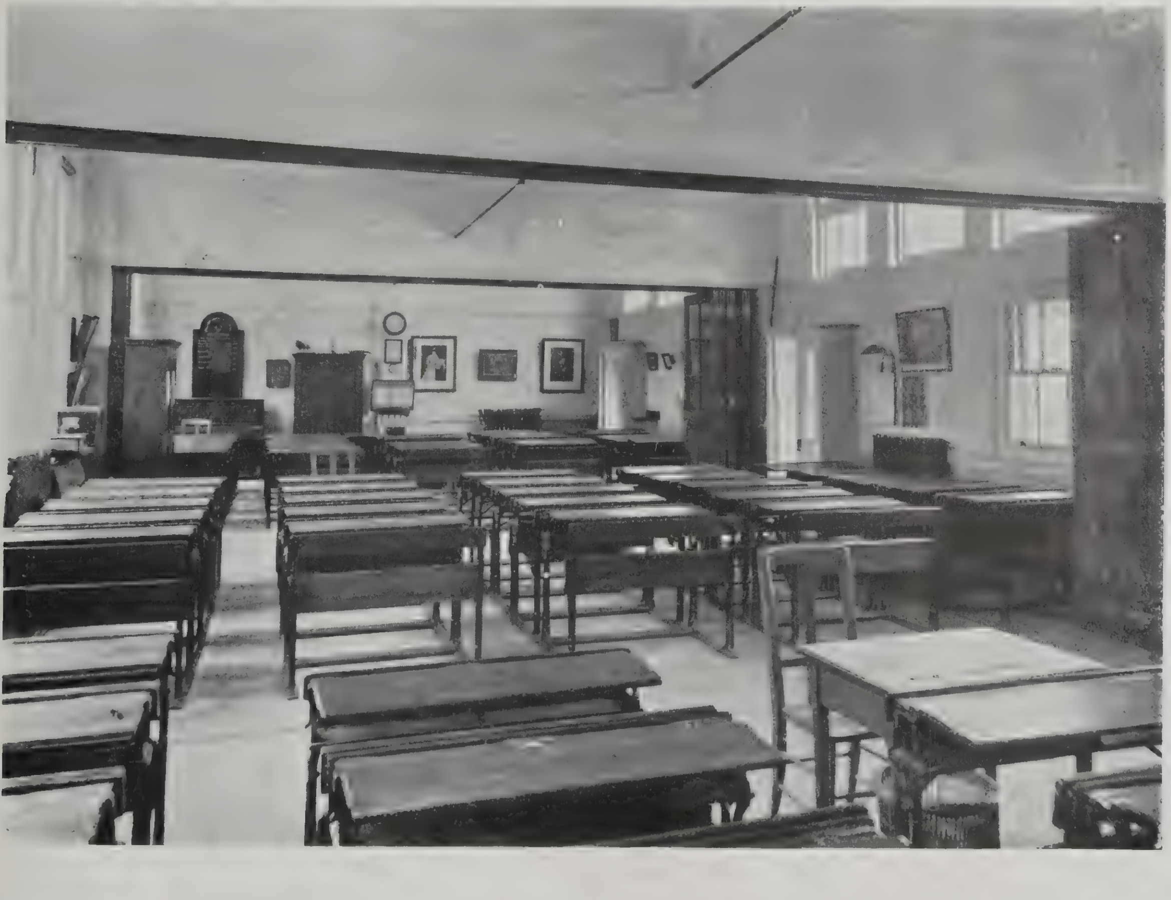




WILLESBOROUGH COUNCIL SCHOOL, KENT.

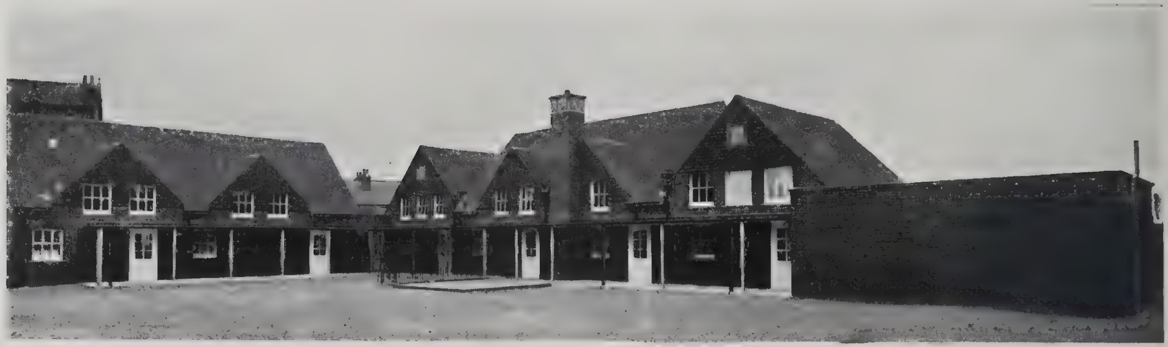
WILFRID H. ROBINSON, M.S.A., COUNTY EDUCATION ARCHITECT for this reason commonly models of good planning of the beauty which springs almost spontaneously n simple and direct adaptation to purpose and the ffected expression of it in the elevation. We have ery firm belief that it is a moral duty to make nentary schools attractive. This obligation applies, ourse, to all schools, but it is especially binding n regard to the schools of the people, because it is who are in most need of all the refining influences can be brought to bear upon them, and because r schools, vastly outnumbering all others, are to be n everywhere, and, in their mere appearance, are of nense educative influence. It is therefore a matter xtreme importance that they should possess comely pleasing exteriors, as well as such internal ngement and equipment as shall conduce to the lth, happiness, and educational progress of the dren.

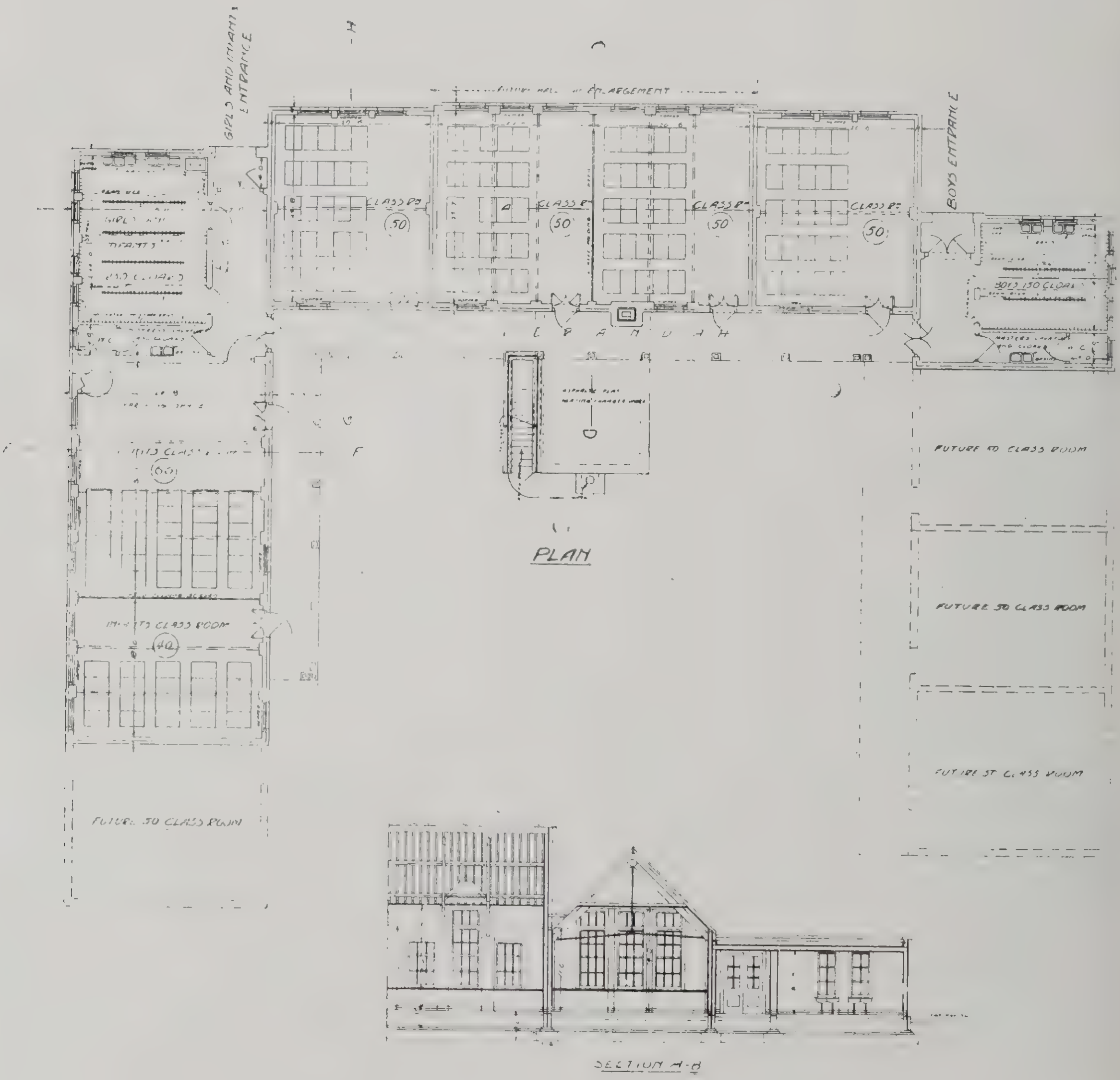
his is no mere advocacy of æsthetical grace for its n sake, no mere plea for such sensuous pleasure as a utiful building can give at the moment of gazing n it. The argument goes deeper and wider than . It should easily reach the moral consciousness ose who are aware of the subtle effects of environ- t, and who know that ugly surroundings produce characters, and that beautiful impressions are nt for the propagation of like conduct. It is nge that this simple psychology of school-building uld have been hitherto so generally ignored or pooh-poohed even by persons calling themselves educationists. It is nevertheless a fact that every architect who designs a beautiful school is a practical educationist whose teachings are more far-reaching, more irresistible—because they are imbibed unconsciously—or, rather, sub-consciously—altogether more powerful, pervasive, and enduring than those of the schoolmaster: the school is teaching when he is sleeping. Nor should it be forgotten that the school inspires the teacher—keeps him a bright and an enthusiastic lover of his avocation, or depresses him to the verge of melancholia, accordingly as the school building is one in which he can take joy and pride, or some dismally squalid shanty which it is penal servitude to work in—a daily affliction that he dreads. The Kent County Council seem to us to be building in the right spirit. Those of their buildings that are here illustrated show a quiet beauty that is, in our view, a valuable educational asset. Moreover, the Council seem to have recognised—that of which architects are very well aware—and it is a point upon which they should always strongly insist—that school buildings are so numerous as compared with other types of building except dwellings—that their ubiquity affects the character not only of the persons who see them constantly, but more especially they influence the character of the buildings which are erected near them. It is therefore a public obligation to keep them architecturally inoffensive.



WILLESBOROUGH COUNCIL SCHOOL, KENT: VIEW IN CLASSROOMS.

WILFRID H. ROBINSON, M.S.A., COUNTY EDUCATION ARCHITECT.





DARTFORD MAYPOLE COUNCIL SCHOOL, KENT

WILFRID H. ROBINSON, M.S.A., COUNTY EDUCATION ARCHITECT.

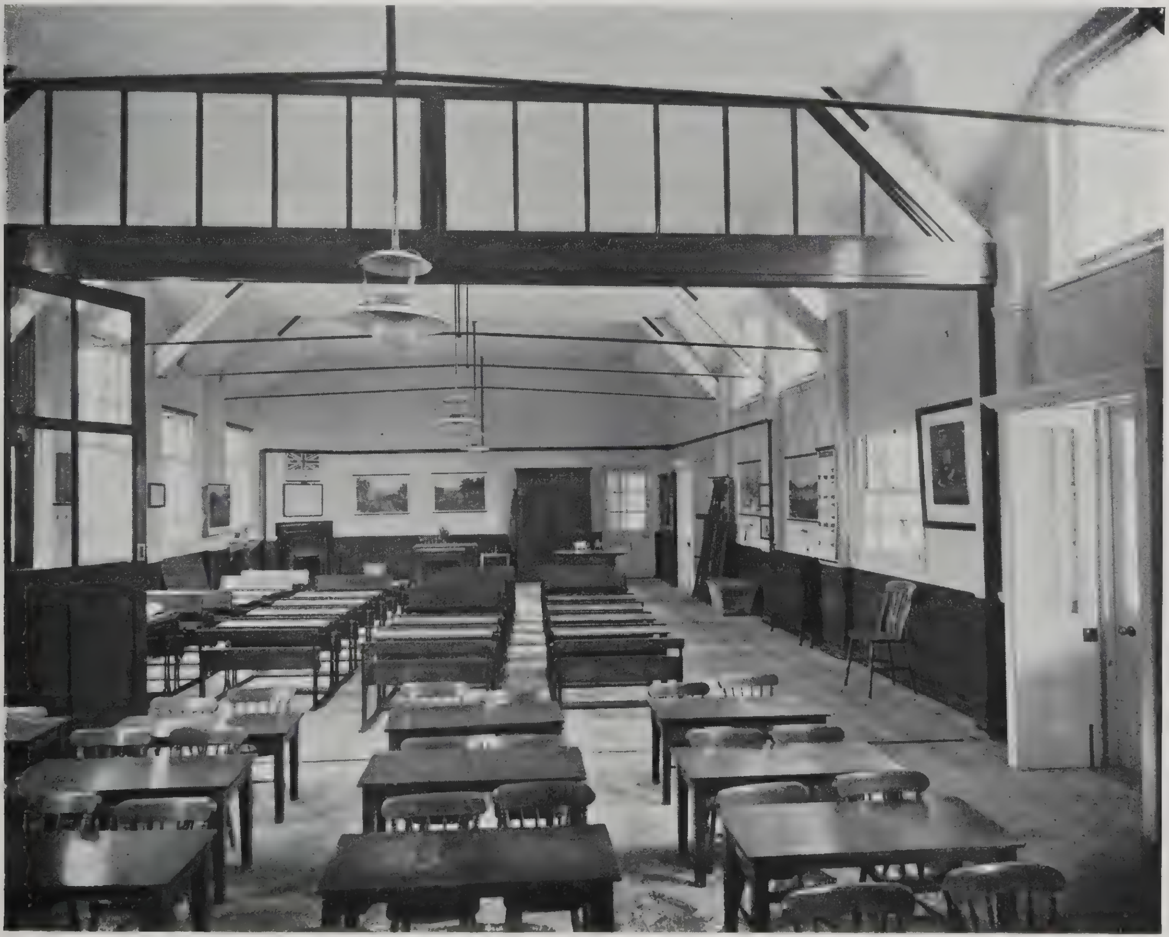
SCHOOL FOR MENTALLY DEFICIENT CHILDREN, TONBRIDGE.

T is rather astonishing to reflect that until within comparatively recent years no special provision was made for the reception of children who were some way abnormal—the deaf, the blind, the ippled, and the mentally deficient, were all lumped gether in the same school with the sound, healthy, id intelligent units, to the grave prejudice of all ncerned, and, of course, to the serious detriment of e general efficiency of the school and of the teaching aff. All too tardily it was borne in upon the educa- nal authorities that these abnormal elements must be segregated, and that special buildings, as well as specially trained teaching staffs, must be provided. This view has now been generally adopted, and a good example of a small school for the mentally deficient is here illustrated. This school, of which, unfortunately, no photographs are available, provides accommodation for thirty-eight children. It is built on the verandah type of plan and has a large playshed, which is used for class purposes in fine weather. Low-pressure hot water is employed for heating purposes, while infants' rooms have open fireplaces in addition.

For illustration see page 40.

DARTFORD MAYPOLE COUNCIL SCHOOL, KENT.

THIS school is built on the verandah principle, a . type of planning which ensures thorough cross-ventilation and the maximum amount of light id sunshine. Accommodation is provided for 300 ildren (mixed and infants), and allowance is made for ture enlargement by the addition of three classrooms for 150 children. The heating chamber is placed centrally under the verandah in order to distribute the circulation equally. Heating is by low-pressure hot water, but infants' rooms have open fireplaces in addition—a practice that is now almost universally adopted.



DARTFORD MAYPOLE COUNCIL SCHOOL, KENT: VIEW IN CLASS-ROOMS.

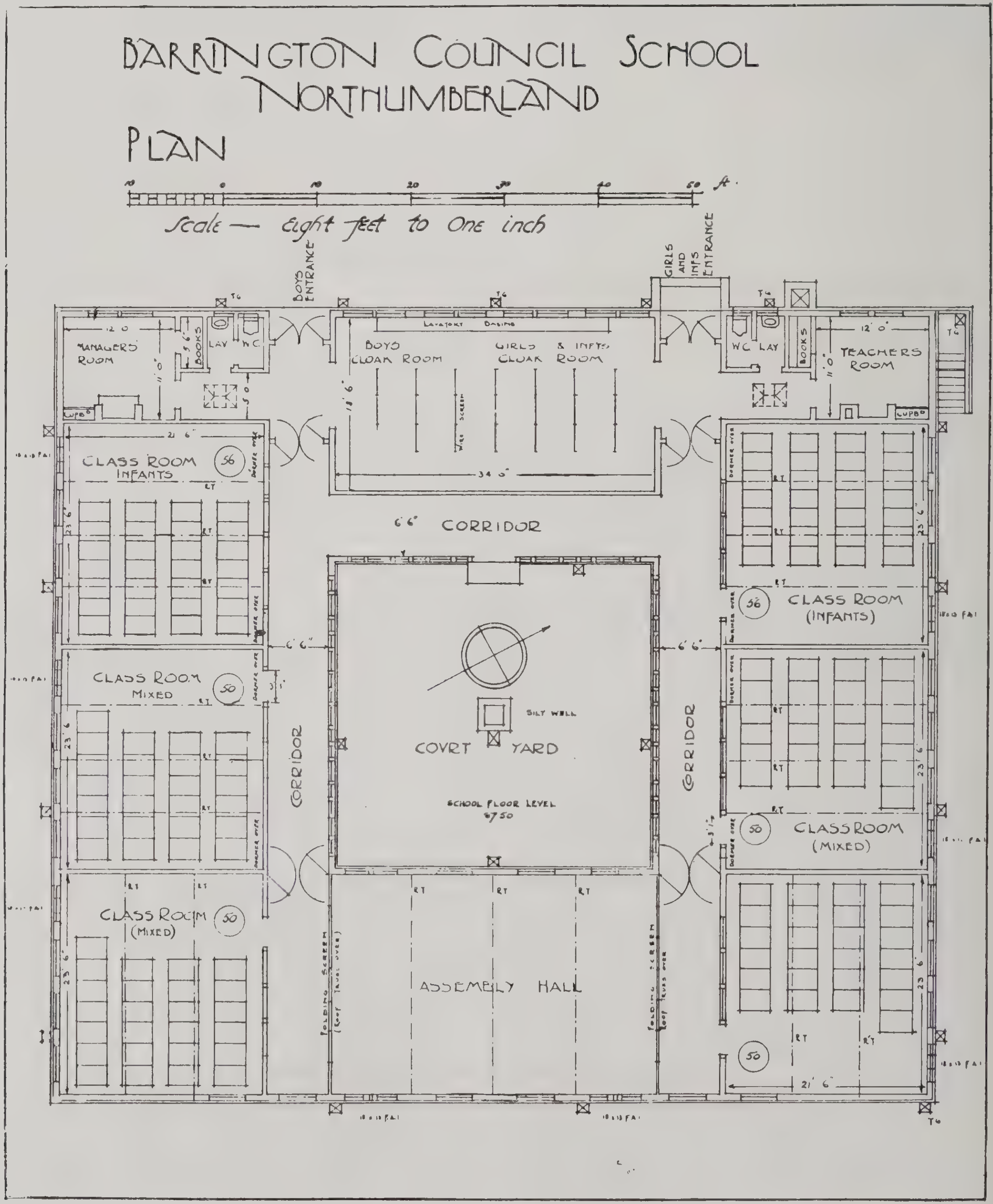
WILFRID H. ROBINSON, M.S.A., COUNTY EDUCATION ARCHITECT.

BARRINGTON COUNCIL SCHOOL, NORTHUMBERLAND.

THIS school is erected at Barrington Colliery, about sixteen miles from Newcastle-on-Tyne. It is constructed of wood on brick foundations, the mode of construction being shown on the accompanying plan. The brick foundations are reinforced in two alternate courses, the reinforcement consisting of three rows of best galvanised steel.

The wood superstructure is securely fastened do by wrought-iron bolts and plates, and bedded in t foundations. The framing is of wood, weathe boarded on the outside and lined with asbestos shee ing on the inside. The floors throughout are of wo joists, boarded and supported on sleeper walls.

The ceilings are formed with asbestos sheets, and t



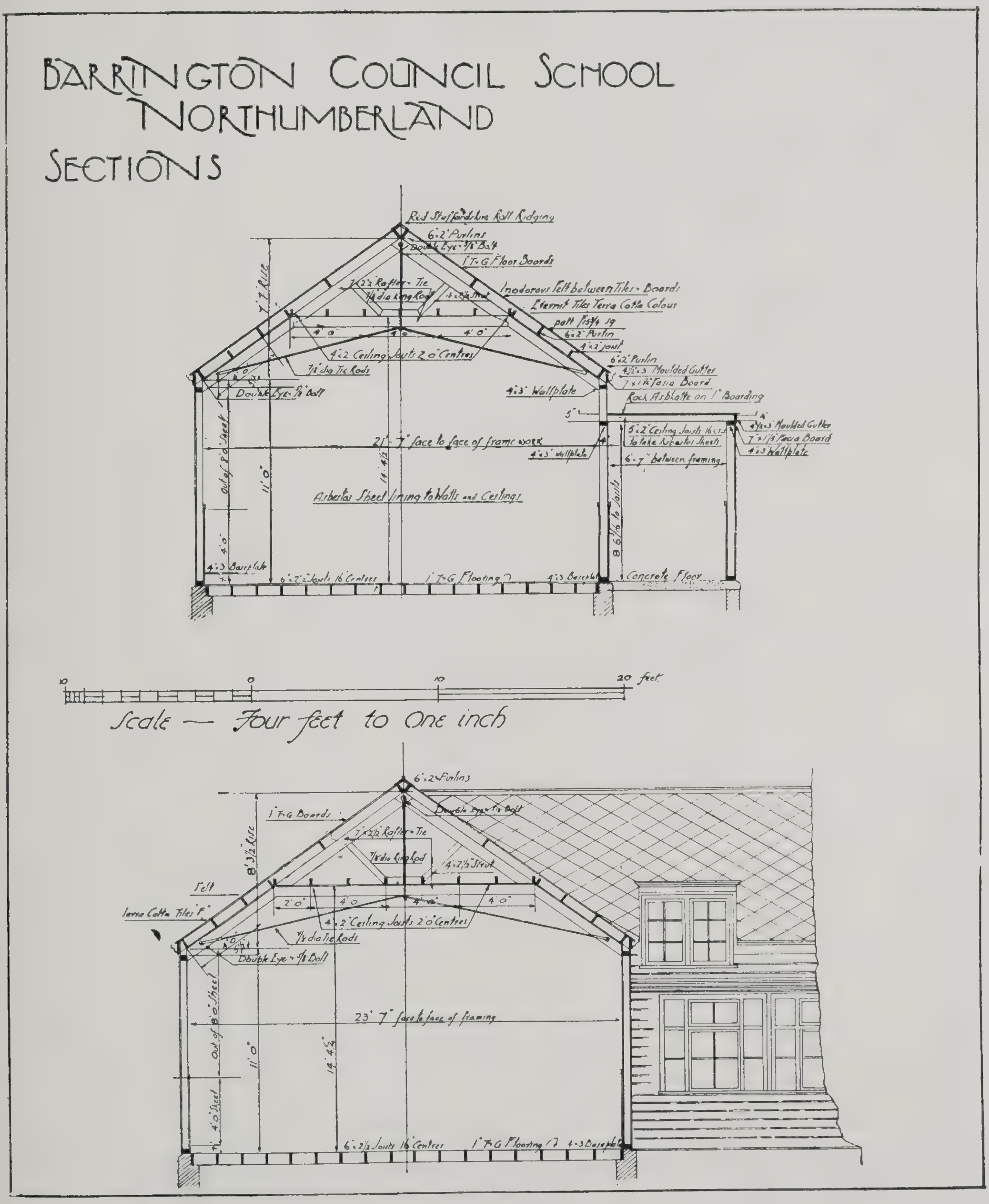
BARRINGTON COUNCIL SCHOOL, NORTHUMBERLAND: PLAN.

G. TOPHAM FORREST, F.G.S., COUNTY ARCHITECT.

ofs are covered with Eternit slates. The st of the school worked out at about £7 a school ace.

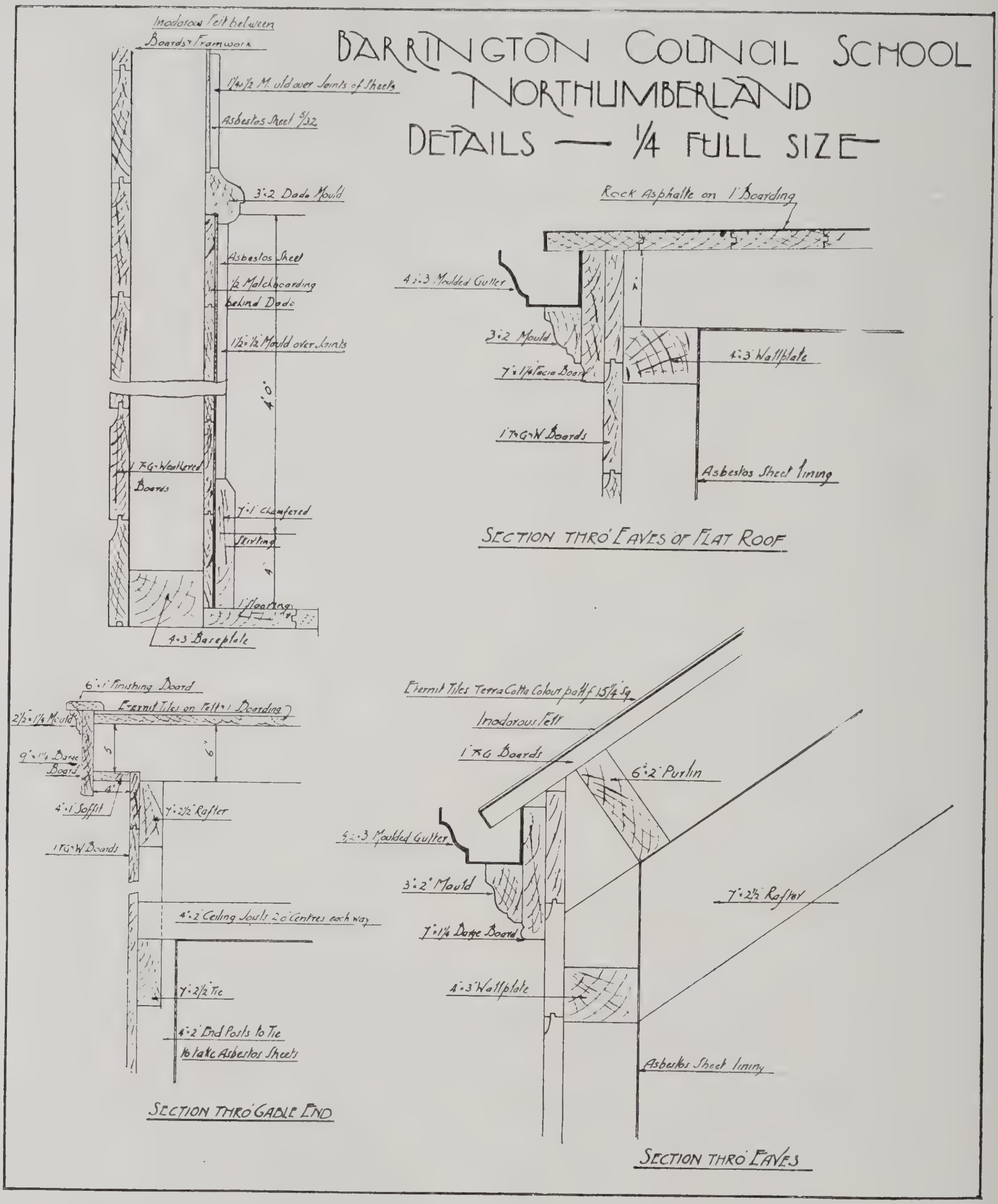
For colliery districts, where the life of the colliery is icertain, such a building is strongly to be recomended. It is considerably cheaper than a brick or one building, and, with the exception of the main alls and floors, can be finished exactly similar to one. this instance, a low-pressure water apparatus was stalled, with ample heating margin, and a twenty ars' loan was granted upon it from the Local Governent Board.

The school, which is compactly arranged around a square courtyard, comprises two infants' and four mixed class-rooms, the one type accommodating fifty-six and the other fifty children. Large cloak-rooms for boys, girls, and infants are provided adjacent to the entrance doorways. It will be noted that adequate lavatory basins are installed. An assembly-hall of commodious proportions is also provided. Manager and teachers have comfortable private rooms of their own, with separate lavatory accommodation. Some interesting constructional details are shown on the following page.



BARRINGTON COUNCIL SCHOOL, NORTHUMBERLAND: SECTIONS.

G. TOPHAM FORREST, F.G.S., COUNTY ARCHITECT.



BARRINGTON COUNCIL SCHOOL, NORTHUMBERLAND : DETAILS.

G. TOPHAM FORREST, F.G.S., COUNTY ARCHITECT.

INFANTS' SCHOOL AT THORNBURY, BRADFORD.

HIS school occupies a site on the Leeds Old
Road, and provides accommodation for 368
scholars. The principal front, which faces
road, and has a south aspect, is occupied by
-rooms on each side of a central assembly hall.
hall will accommodate the whole of the
lars at one time, and can also be used for physi-
xercises and school singing without causing
rbance to the classes in the various class-
s. It is amply lighted and cross-ventilated,
entrance doors in the front bay, which will be
d useful should the hall be used for a public
ing.

e approach to the hall for general school pur-
s is from the covered corridors, which traverse
vhole length of the school on the north side of
lass-rooms. At each end of the building is an
-air teaching verandah, the south sides and
of each being provided with movable glazed
tions, as a protection during inclement
her.

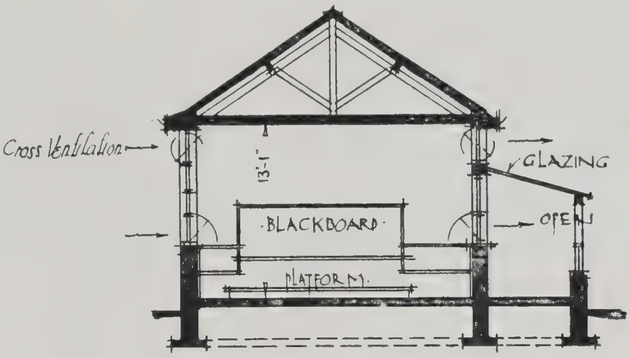
e babies' room is situated at the south-west
of the school, this being the most sheltered
ion of the site. The room is so arranged that
n be shut off from the remainder of the school
ing if so desired, and is of ample dimensions,
g a large bay window on the south. An open
lace is also provided, in addition to the heating
and radiators, and separate provision is made
nfants' cloaks and lavatories.

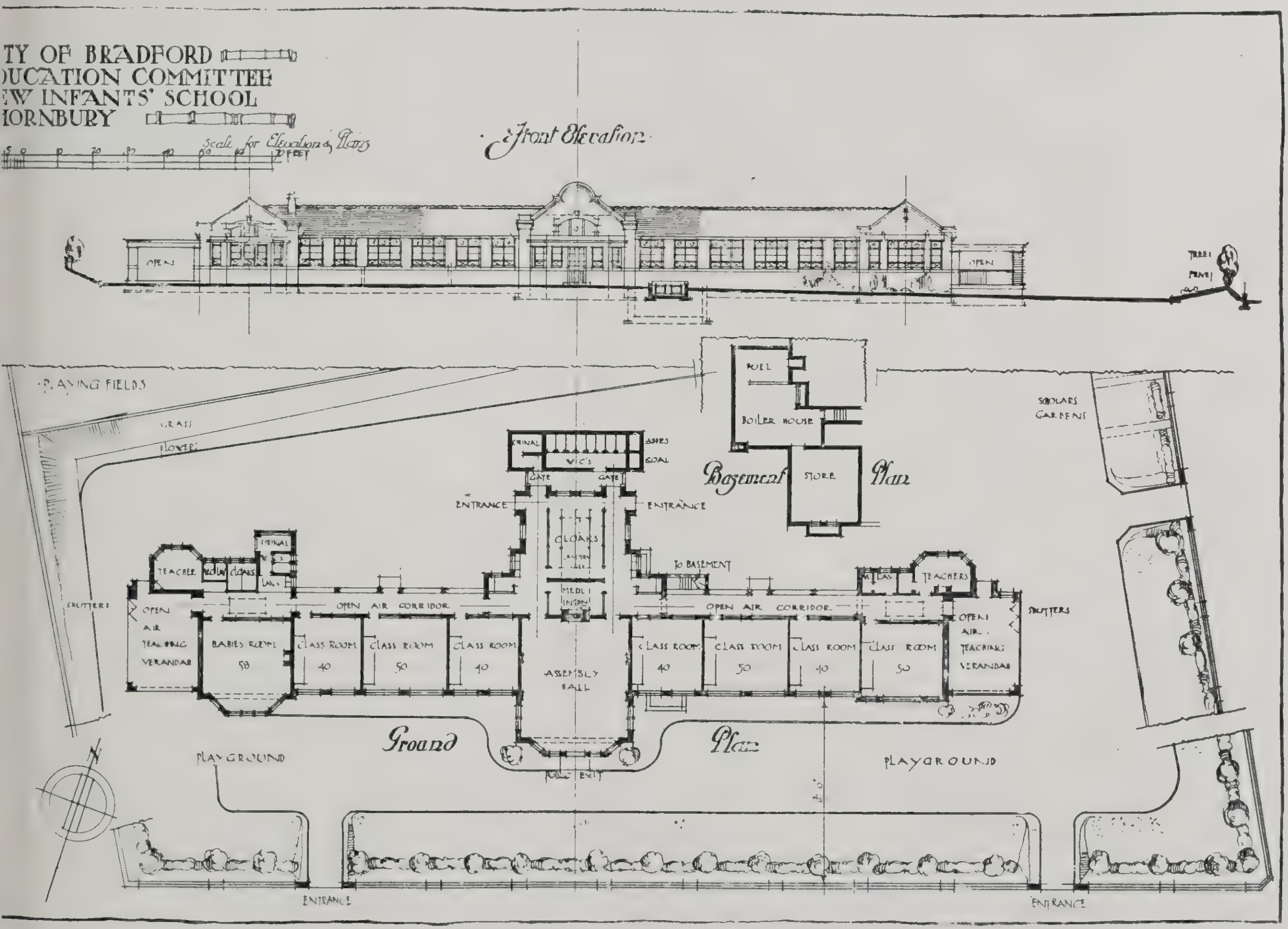
In the centre of the block immediately behind the assembly hall is the medical inspection room, which can also be used as an ante-room to the hall.

The teachers' rooms are situated at the extreme ends of the corridors on the north side, and allow of a thorough supervision of the playgrounds and conveniences. Each of these rooms is provided with an open fireplace in addition to the ordinary heating apparatus.

The heating is on the low-pressure hot-water system, and natural ventilation is obtained by the formation of hopper windows in the lower portion of the windows, and pivot-hung-sashed in the upper.

The cost of the school works out at £15 4s. 10d. per scholar, which constitutes a record for cheap buildings in Bradford.





INFANTS' SCHOOL AT THORNBURY, BRADFORD.

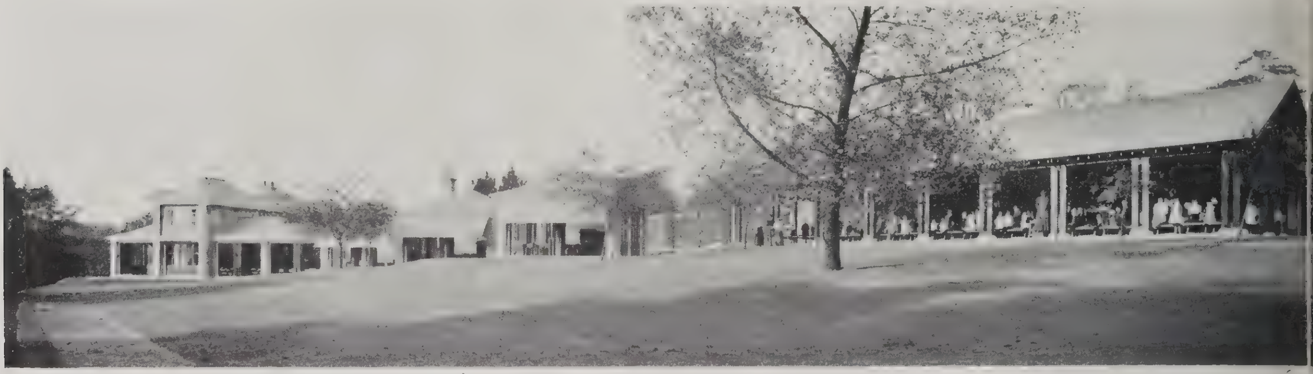
W. WILLIAMSON, LICENTIATE R.I.B.A., CITY ARCHITECT.

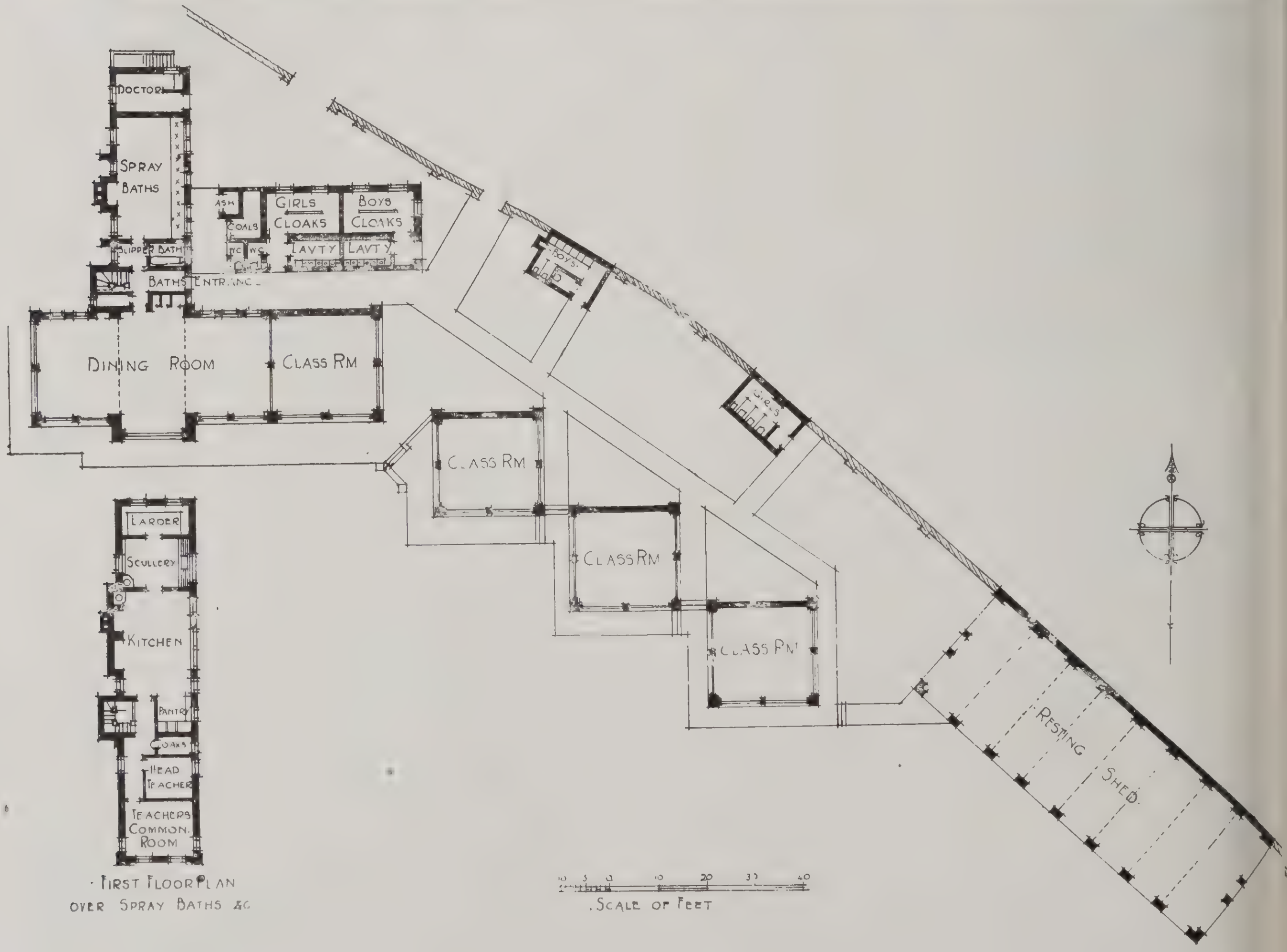
III. OPEN-AIR AND OTHER SPECIAL SCHOOLS.

OPEN-AIR SCHOOL, UFFCULME, BIRMINGHAM.

THIS building is a good example of current practice in open-air school design. Built on a sloping site, it comprises, roughly, four class-rooms, a dining-room, separate accommodation for teachers, spray baths, and a large resting sh
Each class-room seats about thirty-two children.

Boys' and girls' cloak-rooms and lavatories are p
vided adjacent to the spray baths.





OPEN-AIR SCHOOL, UFFCULME, BIRMINGHAM.

COSSINS, PEACOCK, AND BEWLAY, ARCHITECTS.

OPEN-AIR SCHOOL, KETTERING.

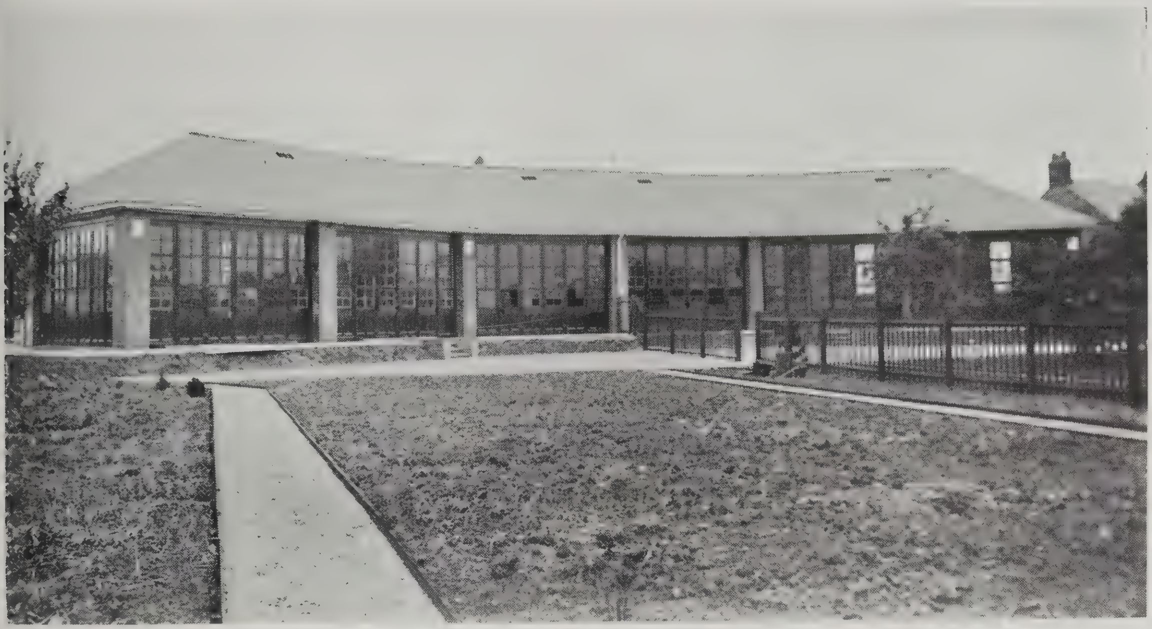
ITH the development of the open-air school movement a demand has been created for a wholly novel type of building, to which none e accepted canons of school planning apply. It is realised that enclosed rooms are an unsatisfactory onment for growing children, particularly those of urally weak constitution.

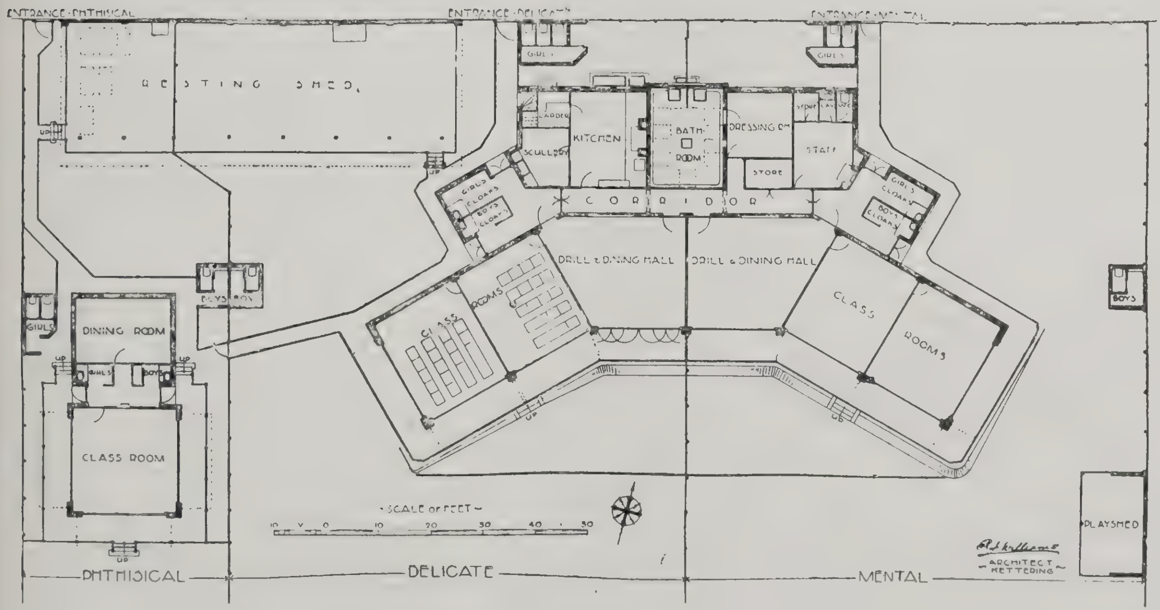
e school at Kettering, which has been built on st the highest ground in the town, provides, in ion to classroom accommodation, dining-rooms, in n meals are served to all scholars. The mentally tive and the delicate are accommodated in the main building, the central portion of which faces almost due south.

On each side are wings, comprising two classrooms, measuring about 21 ft. by 18 ft. These have been canted out at the angles, so as to afford as much shelter as possible from the north winds.

The rooms are about 11 ft. in height, and are effectively treated with distemper in two shades of green. Electric light has been installed throughout.

A separate phthisical block is provided, the flooring being raised 2 ft. 6 in. from the ground. The school is estimated to have cost £3,000.



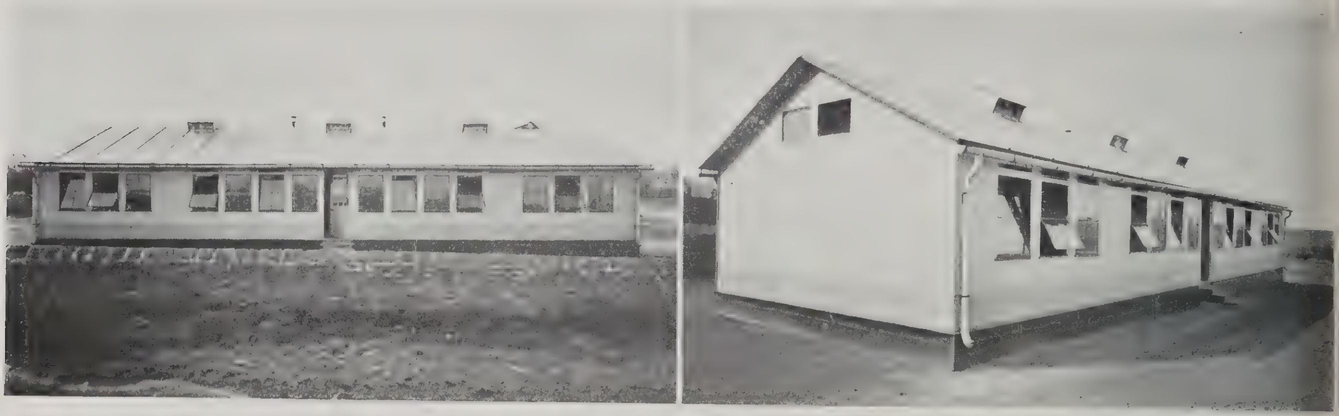


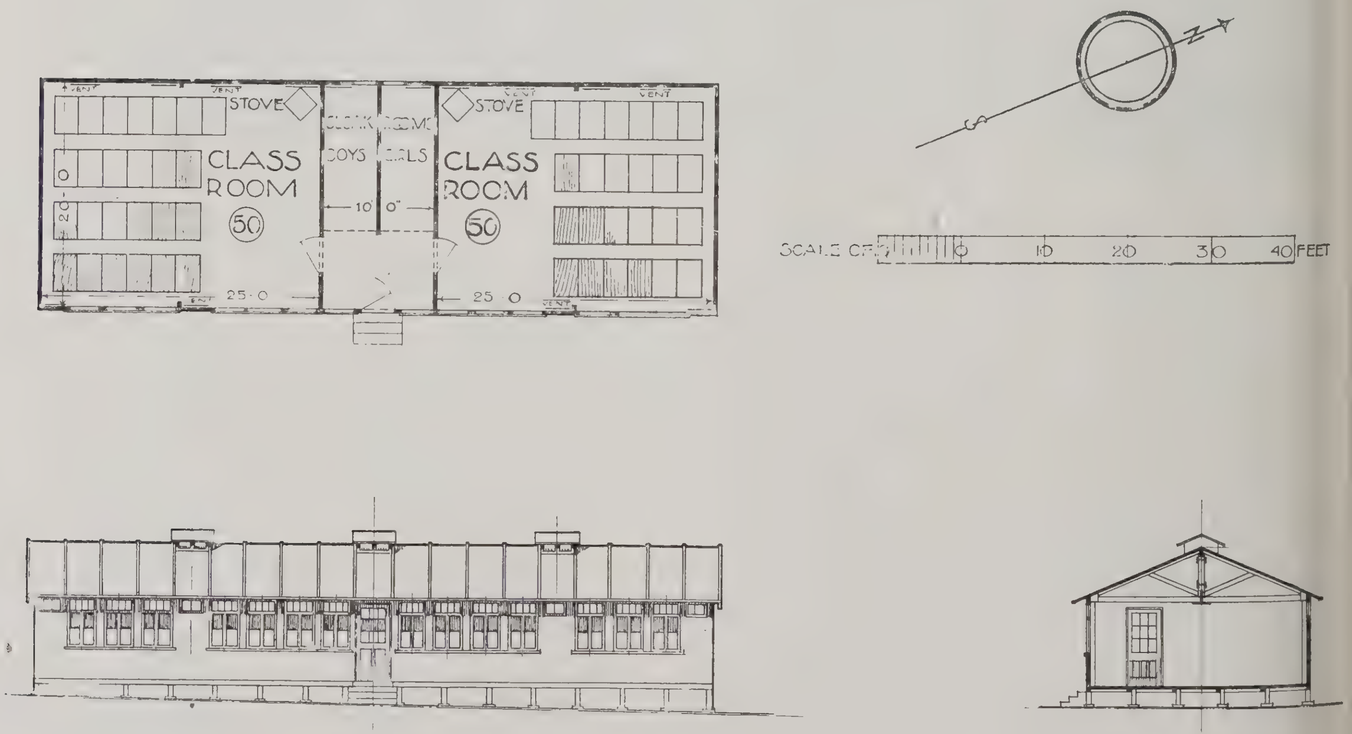
OPEN-AIR RECOVERY SCHOOL, KETTERING. R. J. WILLIAMS, ARCHITECT.

PORTABLE SCHOOL, ELLINGTON, NORTHUMBERLAND.

THIS school is entirely portable, and is erected on what has been described as the hook-and-eye principle. It is formed principally of wood-boarding, with asbestos sheeting strained across it, and the building is set upon piles which can be adjusted to any required level. The building is made in sections, and was put together and completed in the remarkably short space of twenty-four hours. It has withstood some of the roughe gales of Northumberland.

The cost was £400, which is £1 per head mo than the cost of an ordinary corrugated-iron buil ing. A school of this description is of inestimab value in pit districts, where pit-sinking operatio are in progress, and where, consequently, the pop lation is of a migratory character.



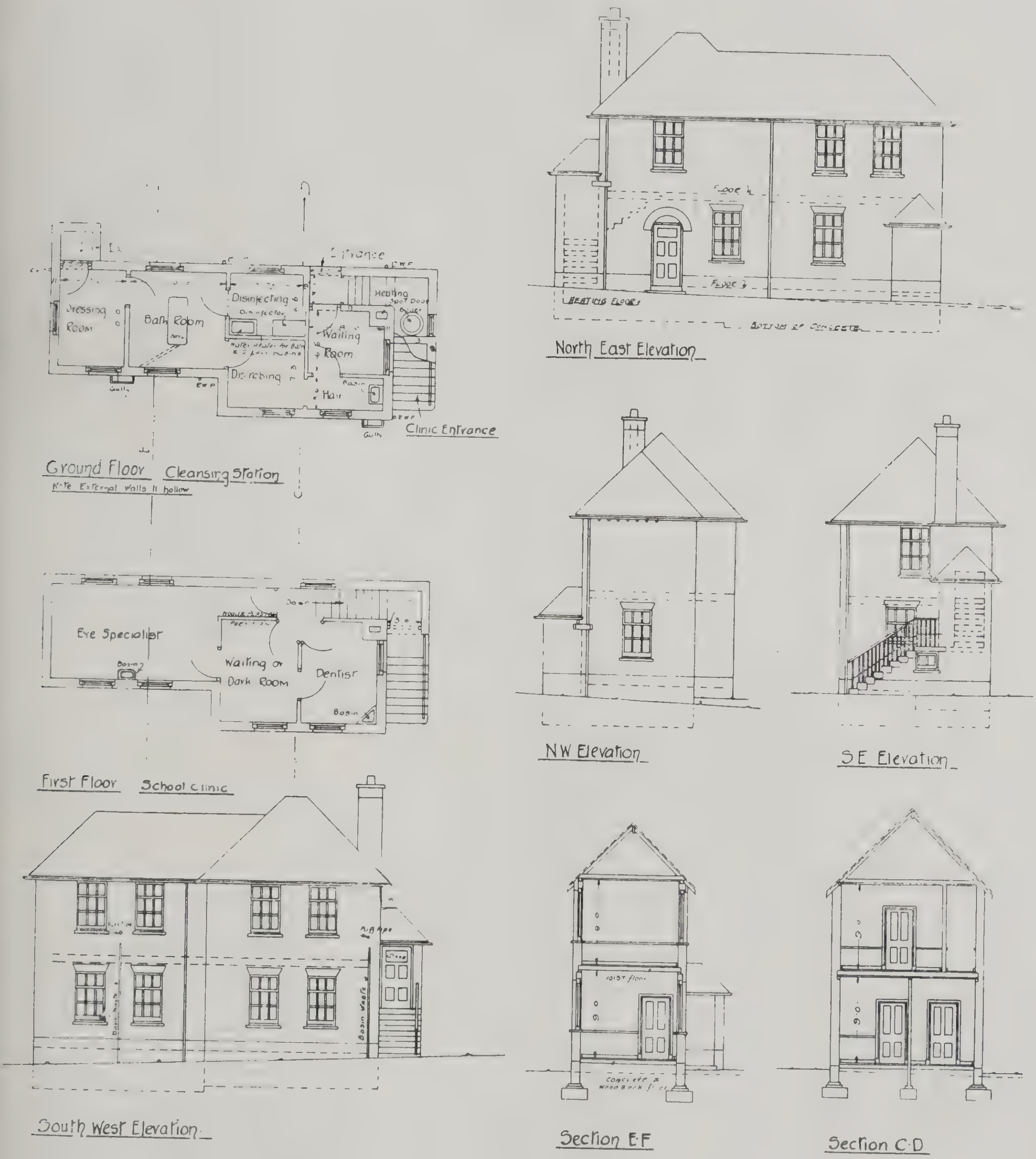


PORTABLE SCHOOL FOR 100 SCHOLARS AT ELLINGTON, NORTHUMBERLAND.

G. TOPHAM FORREST, ARCHITECT.

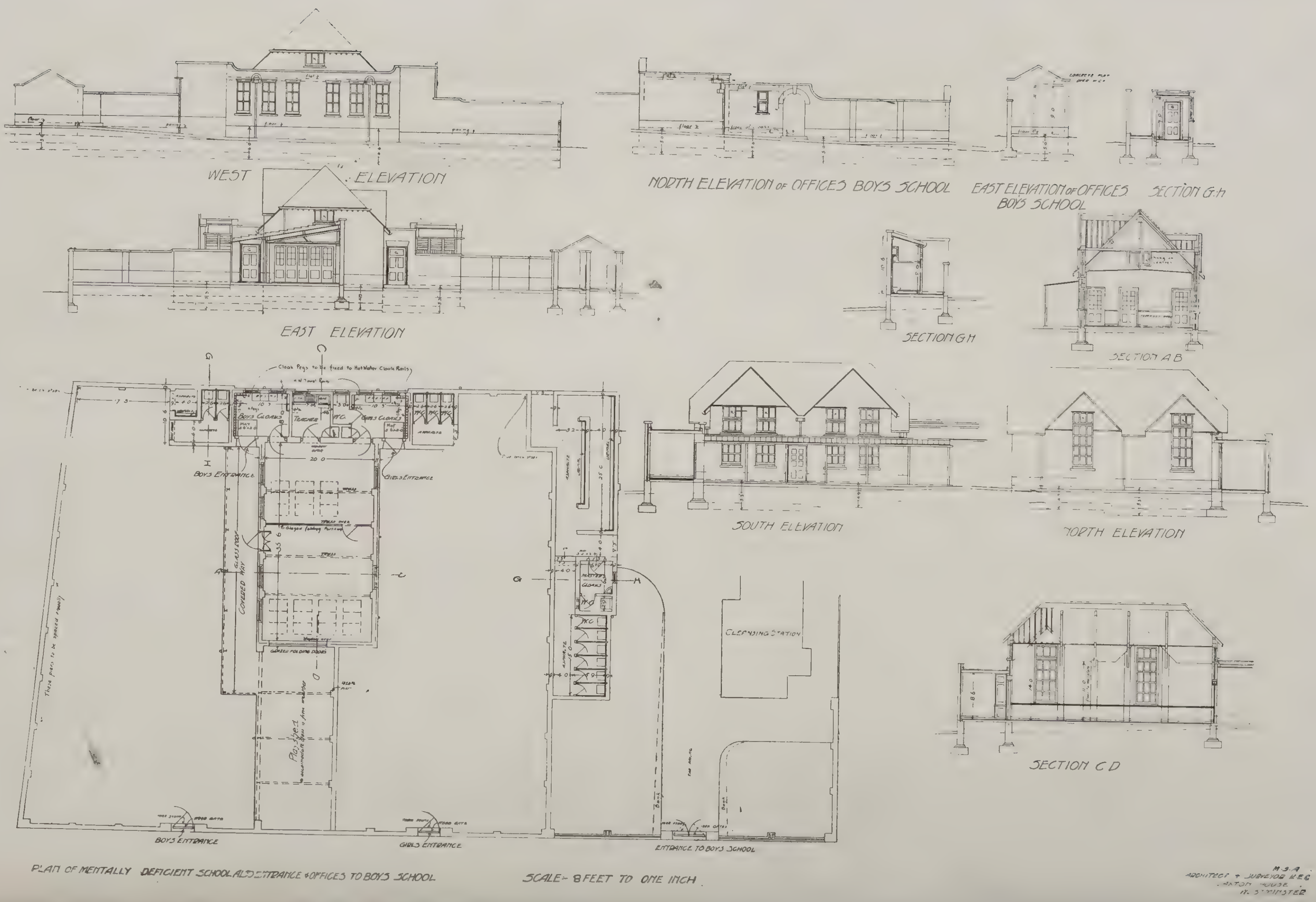
CLEANSING STATION AND SCHOOL CLINIC, TONBRIDGE.

IS building adjoins the school for mentally-deficient children, which is a centre for the locality. The cleansing station contains waiting, ing, bath, disinfecting, and dressing rooms on the ground floor, and rooms on the first floor for dental and ophthalmic treatment. The building is heated by low-pressure hot water. Photographs, unfortunately, are not available.



CLEANSING STATION AND SCHOOL CLINIC, SUSSEX ROAD, TONBRIDGE, KENT.

WILFRID H. ROBINSON, M.S.A., COUNTY EDUCATION ARCHITECT.



SCHOOL FOR THE MENTALLY DEFICIENT, TONBRIDGE, KENT. WILFRID H. ROBINSON, M.S.A., COUNTY EDUCATION ARCHITECT.

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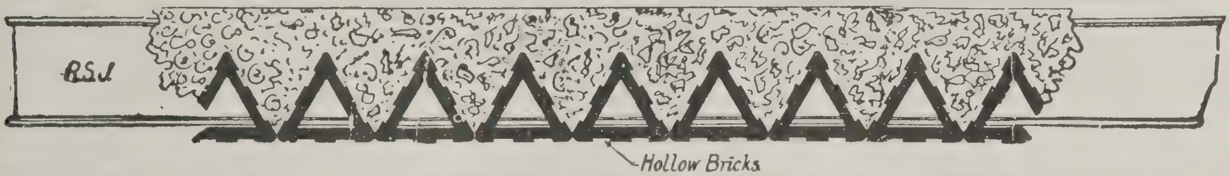

dvantages of this Construction:—No centering required. Rapid in Construction. Sound Resisting. Light in weight. No discolouration of ceilings. backing of ceilings, the grooved bricks giving an excellent key for plaster. Moderate in price. Dries out quickly. Can be fixed close to and over existing floors.

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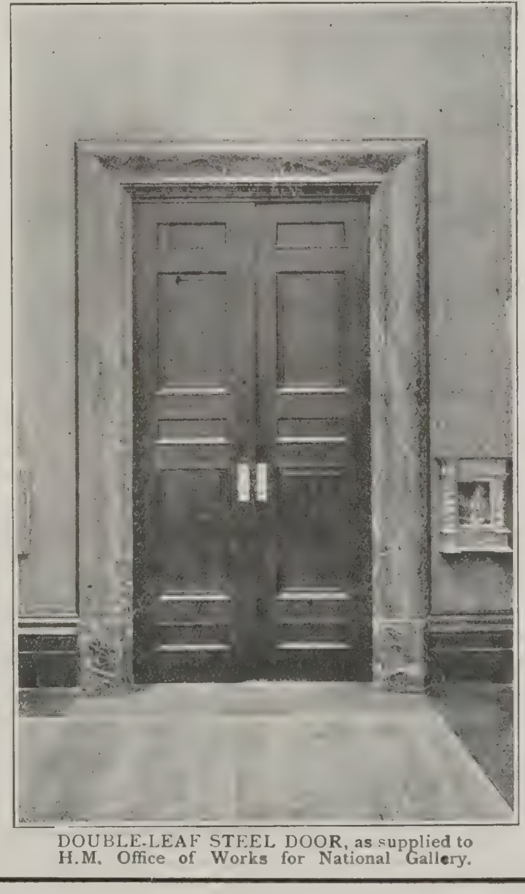

DOUBLE-LEAF STEEL DOOR, as supplied to H.M. Office of Works for National Gallery.

"THE BUILDERS' PARLIAMENT."

On this subject Mr. C. Ernest Fayle has a thoughtful essay in the "Westminster Gazette."

Next to the conduct and objects of the war, he writes, no subject is engaging more attention at the present time than the future of British industry. The desire for a juster, more stable, and more effective industrial system is as deep and wide spread as the desire for a better order in international relations, and the discussion of aims and methods reveals a wide divergence of opinion.

As a general rule, the most successful human institutions are those of gradual growth, but there come from time to time moments when a whole stream of tendencies is suddenly embodied in concrete form. Such landmarks are not always easily recognised at the time. It is easy to confuse the realisable scheme with the visionary Utopia. But they do occur, and the rate of human progress depends upon our ability to recognise them. President Wilson's manifesto may not improbably form such a landmark in the field of international politics. In the industrial sphere it may very possibly be found in the proposal for a Builders' National Industrial Parliament now under consideration.

The terms of this proposal have been made public. It provides for the creation of a body appointed in equal numbers by the National Associated Building Trades Council and the National Federation of Building Trades Employers, and including representatives of the managing staffs and actual operatives, as well as employers and trade union officials. To this Trade Parliament would be entrusted the task of setting up Committees of Inquiry on every subject affecting the prosperity of the industry and the welfare of those concerned in it, and of framing, on their recommendations, two codes, one compulsory and one voluntary, for the government and guidance of the industry. The Compulsory Code, dealing only with questions of wide application on which there was general agreement, would require the sanction of the Board of Trade or a Ministry of Industry, who would see that the interests of consumers were safeguarded. The provisions of the Voluntary Code would be suggested for experiment and report by progressive and enterprising firms, with a view to subsequent more general adoption. The danger of undue centralisation would be provided against by the establishment of Joint District Boards and Works Committees affiliated to the Parliament.

Among the subjects proposed for early consideration are several of great importance, such as the regularisation of wages, the prevention of unemployment and decasualisation of labour, technical training and research, scientific management and increase of output. But the real importance of the scheme lies not so much in its specific proposals as in the broad principles which animate it.

It is significant that the proposal is contained in a memorandum issued by the National Associated Building Trades Council, representing twelve separate unions, with a total membership of a quarter of a million. Hitherto, the relations of trade unions and employers' federations have been, in the mai frankly those of hostile protective ass ciations. This is fully recognised by tl authors of this proposal, and while th claim that Labour demands for improv conditions are often "opposed almost as matter of duty" by the employers, th admit that "many improvements in tl direction of increased production ar efficiency are countered by the restricti regulations of the trade unions."

For this atmosphere of mutual distru and hostility the Building Trades Counc desire to substitute the "intimate ar continuous association of Manageme and Labour for the purpose of promotin the progressive improvement of their indu trial service." In other words, while th desire to obtain sympathetic consideratio by the employers of all that concerns tl working conditions and well-being of tl workers, they pledge themselves to thro the whole weight of the trade unions upo the side of improved methods and organ sation, efficient working, and increase output. They believe that "the commo interests of industry will be fund to b wider and more fundamental than thos which are still, admittedly, opposed," an that the new industrial order must b based upon recognition of this fact.

It is characteristic of their desire t make the work of the Builders' Parliamer constructive that all questions of concili tion and arbitration are definitely exclude from its purview. Machinery for th adjustment of differences already exist and what the Building Trades Counci have now in mind is the change from con stant latent friction or apathy to organise combined effort.

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OBITUARY.

Mr. G. W. Heron.

e death has taken place at his resi-
:, 38, Brighton Grove, Newcastle, of
George William Heron, builder, of
pration Street. He was fifty-six years
e.

Mr. James Wilson.

e death has taken place of Mr. James
n, who for some years filled the office
an of Guild in the city of Edinburgh.
Wilson was born in 1845, and was
rincipal of a firm of builders and
tors. He was a patron of art, and
red a fine collection of pictures.

aillie J. A. Smith, Aberdeen.

e death of Baillie James A. Smith
taken place at his residence, Ard-
n, Westburn Crescent, Aberdeen.
as senior partner of the firm of
rs. D. Macandrew and Co., Ltd.,
ers and contractors, Loch Street. That
was established in 1850 by the late
Daniel Macandrew, into whose em-
nent Mr. Smith entered in 1872. After
g his apprenticeship and working
al years both in the office and the
shop, Mr. Smith went to London, and
engaged with a large building firm
for a number of years. He re-
d to Aberdeen in 1883, and on the
ment of Mr. Macandrew, sen., he
ed into partnership in the business of
rs. D. Macandrew and Co. with Mr.
ndrew, jun. Following the death of
Macandrew, jun., he took over the
ess and conducted it on his own ac-
with characteristic energy and
ed success. Among other large con-
which his firm carried out may be
ioned Peterhead Prison, Craiginches
n, the Aberdeen University Exten-
, Greyfriars Parish Church, and the
deen Post Office. In all parts of the
their work is to be found. The
e of Cromar, for the Marquis of Aber-
; Aultmore House, Nethy Bridge;
House, Elgin; Dulnain Bridge,
mhill, for Mr. Alfred Booth; and
ybrough, for the Right Hon. E. S.
ague, M.P., suffice to show its scale
character. They held the appoint-
of showyard contractors to the High-
and Agricultural Society. Messrs.
acandrew and Co. are also horticul-
builders, and one of their largest
s of this kind was the winter Garden
uthie Park. Another notable local
as the building of the famous Strathcona Hall, erected at the Gallowgate in connection with the University quatercentenary celebrations. Erected and furnished complete in six weeks to accommodate 4,500 guests, it was taken down and the site entirely cleared in ten days.

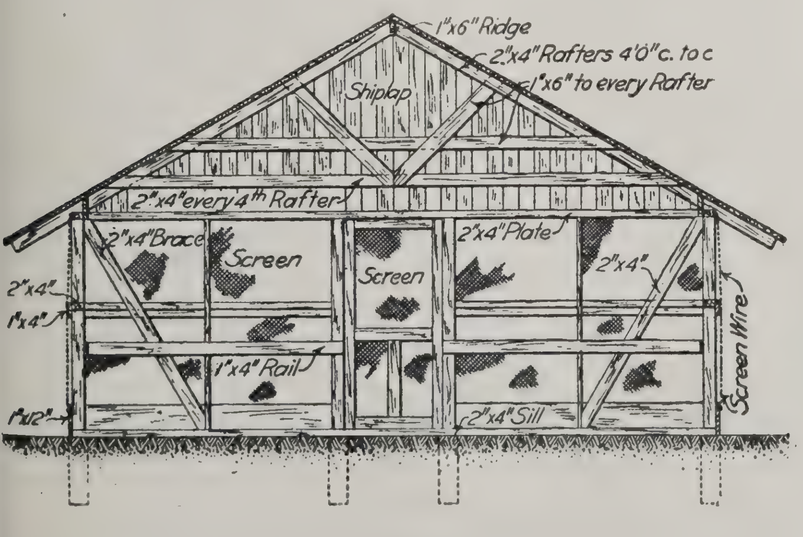
MILITARY HUT CONSTRUCTION IN THE U.S.A.

That the scope of a soldier's activities has been greatly enlarged in recent years is attested by the construction of a large number of mess halls by the militia and regular army at Fort Sam Houston, Texas. In the typical case of an infantry regimental unit, there are usually nineteen mess halls, six 20 by 36 ft. and thirteen 20 by 64 ft. Ofthe smaller size, one is used for headquarters, three for battalion, one for supply, and one for headquarters' company. Of the large size one is used for the machine-gun company and the remaining twelve for companies of the line. The centre line of each of the larger halls, which are located at the head of each company street and flanked on the left by the headquarters'-company mess hall, and on the right by the supply-company mess hall, coincides with the centre line of the row of company tents.

The materials used were pine lumber, tar-paper roofing and wire screening.

A commissioned officer was detailed in charge of the work and was held accountable both for labour and materials. The execution of various parts of the work was under the immediate charge of non-commissioned officers, the work usually being divided into carpentry, roofing, teaming, and general labour. The carpentry was done by the company mechanics, one detailed from each company to the construction gang. Special details of other soldiers from such companies as seemed to afford the best material completed the construction organisation, which amounted usually to between thirty and fifty men. A civilian carpenter was employed to work with the carpenter squad.

After one or two houses had been completed the men were sufficiently trained and proceeded rapidly with the work. A squad of thirty men working nine hours a day usually completes one house per day. The progress of the work was greatly facilitated by an undercurrent of rivalry existing among various regiments. Details of construction are shown in the accompanying illustration.



DETAILS OF MILITARY HUT CONSTRUCTION.

WAR SUPPLIES DEPOT IN DUBLIN.

The sustained efforts of the Dublin Chamber of Commerce, supported by the Irish members of Parliament, for the opening of a Supplies Depôt and Information Bureau in Dublin are about to bear fruit, temporary premises having been taken by the War Office in Oriel House, Westland Row, for this purpose. The matter has been under consideration for a considerable time. A few weeks ago a representative of the War Office visited Dublin to inquire into the subject. He was met by a deputation representing the Industrial Committee of the Irish Party, who drew his attention to three alternative sites, one of them being Oriel House. The deputation pressed upon the War Office the desirability of at once securing temporary accommodation pending the erection of a more suitable building. Oriel House, which is at present occupied by the Dunlop Rubber Company, is a centrally situated and commodious building. It will be vacated in about twelve months by the present tenants, who have acquired the site formerly occupied by Messrs. Armstrong and Co.'s paper warehouse in Lower Abbey Street, where they intend to erect a large building. In the meantime the company have entered into an agreement with the War Office by which they will place two large rooms at their disposal, and they are now in possession of the military authorities. It is intended to open these rooms for the exhibition of patterns of articles required by the War Office, and to establish an information bureau, where intending contractors will be able to obtain all necessary information as to contracts, materials, manufacture, and so forth. Hitherto intending Irish contractors had to go to England to inspect patterns. It is hoped that no time will be lost in making the necessary arrangements for the opening of the new pattern rooms.

THE DUNDEE HOUSING MODEL.

At a recent meeting of Dundee Corporation the City Engineer reported that to meet the views of those who had made suggestions and criticisms he had prepared the following alternative schemes: (a) Plan showing arrangement similar to that first under consideration and as provided in the model, but with the coal bunker removed from the kitchen-scullery and placed near the entrance door, the bedroom enlarged, and a bath provided in each house of whatever size; (b) plan showing each house provided with a lobby giving entrance to the bedroom and bathroom without passing through the living room, and also showing a bath in each house; (c) a similar arrangement to that provided in (b) with the exception that baths are provided only for the three-roomed houses, and that the small houses have a combined sink and tub in the kitchen-scullery instead of a sink only, as in the model; and (d) a plan similar to (c), with the addition that certain of the houses are increased in size by the provision of bedrooms in the attic, making the design two storeys and attics, while the former designs were only two storeys in height.

These amended plans are evidence of the usefulness of the model which, at the suggestion of Mr. James Thomson, the City Engineer, was prepared and exhibited with the object of eliciting opinions and suggestions.

PUBLISHER'S ANNOUNCEMENT.

THE question of the cost of Advertising is governed entirely by the circulation of a publication. The prices for small Advertisements enumerated below are framed upon the lowest possible basis in order to allow the use of the columns of the Journal for "Wants," &c., at a figure well within the reach of everyone.

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"OWEN JONES" PRIZES OF THE ROYAL SOCIETY OF ARTS.

In consequence of the abandonment last year by the Board of Education of the National Competition of Students of Schools of Art, no prizes were offered under the Owen Jones Trust in 1916. For the present year the Council, with the assistance of the Director of the Victoria and Albert Museum, were able to arrange an independent competition, and notice was sent out in November last stating that the usual six prizes would be offered under the usual conditions to students of schools of art. Each prize consists of a bound copy of Owen Jones's "Leading Principles in Composition of Ornament" and a bronze medal. The competition this year was limited to designs for textiles. The date for the receipt of competing designs was fixed for June 30, 1917, and arrangements for their inspection were made at the Victoria and Albert Museum.

One hundred and twenty designs or works were sent in from twenty-two schools of art by seventy-three students, and these have been considered by the following judges, whose report has now been received and confirmed by the Council: Alan S. Cole, C.B., A. F. Kendrick, Professor W. R. Lethaby, Frank Warner, Arthur Wilcock, and Sir Henry Trueman Wood.

The judges report that the designs submitted show a high average of excellence, and that they could easily have awarded a larger number of prizes than those placed at their disposal, had a larger number been available. They have therefore, in addition to those designs which they recommend for prizes, mentioned a number of others which they consider worthy of commendation. Some of these are really up to the medal standard; others, while showing considerable artistic merit, are deficient in certain technical points necessary for rendering them suitable for adaptation to the various materials for which they are intended. The judges consider that the Society is to be congratulated both on the amount of work sent in under existing conditions by the various schools, and also on its high quality, and they hope that the arrangements adopted for the current year may be continued in future.

They think it desirable that greater stress should be laid by the students' teachers on the necessity for more attention to the technical details required in designs intended for reproduction by printing or in the loom. Very few of the designs sent in had appended to them any explanatory specification such as is usually required for the guidance of the technical craftsman who has to put the artist's drawing into the shape necessary for reproduction.

CHURCHES & WAR MEMORIALS.

In the Lower House of Convocation on July 7 the Archdeacon of St. Albans mentioned that in the course of the evidence taken by the Committee of the House of Lords on the Safety of National Monuments, an opinion was found to be held rather widely that our cathedrals and more important parish churches ought to be nationalised, because they were not properly protected by the present guardians. The answer put forward to such an accusation was that nobody could touch our ancient buildings without obtaining a faculty, but that was not a true answe It was perfectly possible, unfortunatel for an incumbent and two churchwarde to take in hand the alteration and repai of extremely interesting and valuab churches and to do irreparable mischi without its being known until after th mischief was done. Faculty law shou be made more effective. The Dean Worcester pointed out the risk of serio damage being done to our cathedrals war memorials, many of which were questionable taste. If ever it was impo tant that care should be exercised in th issue of faculties it was at present. his own cathedral no memorials were to erected except those of a collective coun or city character.

A New Use for Old Rectories.

The Rev. Edward Miller, writing to th "Guardian" from Wrabness Rector Manningtree, Essex, makes the followin contribution to the housing question: "U and down the country there are parso age-houses no longer suitable for the paris clergyman, who could be accommodate in a smaller and more compact up-to-dat dwelling. There are old rectories whic might be adapted (as farmhouses hav been) as agricultural dwelling-houses and there are also many glebe sites whic should be available for new building Let the subject be well thought out, an not be allowed to drop till somethin tangible and practical comes out of it. the importance of the matter is full realised, it may be some well-considere scheme may be arrived it—through th powerful agency of the Ecclesiastica Commissioners — with the necessar measure of legislation to give it effect."

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ELECTRICAL NOTES.

The Progress of the G.E.C.

Mr. H. Hirst (chairman), presided at the annual general eeting of the General Electric Co., Ltd., which was held last ek, when it was announced that the net profits for the year ded March, 1917, were £265,220, plus £48,053 brought rward, making £313,273. After deducting debenture interest d normal and special depreciation, amounting to £38,541, 74,732 is available, and it is appropriated as follows: 6 per nt. preference dividend, £42,000 ; employees and managing rector's bonus, £18,468 ; 10 per cent. dividend on ordinary ares, free of tax, £62,500 ; reserve, £40,000 ; grants to war pendants, £11,477 ; repayments of income-tax to preference areholders, £10,500 ; balance to carry forward (subject to cess profits duty, if any), £89,786. The reserve account has en increased by £100,000 transferred from pre-war suspense counts of provision for contingencies which have not arisen, d with the addition of the above £40,000, the total amount to e credit of the account will be £400,000. The operations ring the year, it was said, consisted mainly in continuing d developing the policy initiated at the outbreak of the war, he results have again been satisfactory. The works have all en fully occupied, and almost exclusively in the production material and electrical equipment for war purposes, so that actically the whole of the output normally employed in the pply of the electrical trade has been diverted to meet such rposes and for controlled establishments. About 1,700 members of the staff and workpeople are now serving with the lours, so that substitution and dilution of labour has become ore imperative than ever. Thanks, however, to the loyalty d united efforts on the part of those members of the company's technical and commercial staff whom the authorities ve allowed to remain, it has been possible to overcome ccessfully most of their difficulties. The scarcity of raw aterial and the difficulty in obtaining machinery, together ith the Government restrictions placed upon all building erations, has not enabled the company to proceed with the eparations for the developments awaiting the electrical dustry after the war. Capital expenditure during the year new works of immediate importance has amounted approximately to £15,000, and £11,000 has been expended, under rmit from the authorities, to advance the Kingsway building fficiently to protect the steelwork. The investment account the company has again considerably increased, with an inently satisfactory return. Nearly £300,000 has been vested in the Osram-Robertson Lamp Works, Ltd. ; a further 0,000 has been required by the Pirelli-General Cable Works, d. ; and certain smaller sums have been invested in minor ctories essential for the production of material for the company's requirements. All the allied and subsidiary companies ntinue to do well, with the exception of one or two, which ve been adversely affected by conditions of war.

The G.E.C. is to be warmly congratulated on the sturdy and irited way in which it is "carrying on" under the adverse nditions created by the war. Not that it is exceptional in this spect; for when the history of these troublous times comes to written with the judicial impartiality possible only to the nalist who is years away from the heat and strife, some of e honours of war will be accorded to business non-combatants.

Points in Shop-window Illumination.

Discussing some of the fundamental considerations in shopndow illumination in the "Electrical Review and Western lectrician," Mr. W. H. Mather says: It seems to be now reed that, as a rule, the best place for the main lighting is the p edge of the window. Proper reflectors, selected according the depth of the window, are very important, and the background should also be chosen with care. It is better to avoid iny and polished surfaces, but if these are used they should eferably not be carried right up to the ceiling; in this way e can avoid irritating direct reflections of lamp filaments, kely to be visible to persons outside the window.

Another point on which there is agreement is that shadowss illumination is not desirable. On the contrary, provisions ould be made for fairly sharp contrasts. The use of lamps proaching "artificial daylight," or, at least, fairly white in lour, i sdesirable when blue-coloured goods are to be shown d there is an almost unexplored field for ingenuity in the oduction of pleasing colour-harmonies.

The specification of the consumption of energy for windows specified dimensions is a rather awkward problem. Much epends on the type of lamp and reflector employed and the lation between depth and height of window.

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July 27.—**SEWERS. Newry.**—Laying certain sewers, etc., in the town of Rathfriland, for the Newry No. 1 R.D.C. Plans and specifications can be inspected at the Clerk's Office, Workhouse, Newry, also at the offices of the Engineers, P. H. M'Carthy, M.A., B.E., M.I.C.E.I., 39, Westmorland Street, Dublin, and S. Wilson Reside, A.M.I.C.E.I., Margaret Square, Newry. Copies of specification, form of tender, key plan, and bill of quantities can be obtained at the Clerk's Office on deposit of £1 1s., which will not be returned. Tenders, with priced quantities, to be delivered to W. R. Bell, Clerk of the Council, R.D.C. Offices, Workhouse, Newry. Sureties required.

July 30.—**DRAINS. Bridgwater.**—Supplying and laying 350 yards, or thereabouts, of 12-in. stoneware pipes, with 9-in. and 4-in. branch drains, manholes, catchpits, and other works appertaining thereto, for the R.D.C., in accordance with drawings, specification, and instructions of the Engineer, W. Horace Cousins, R.D.C. Offices, Westonzoyland Road, Bridgwater. Drawings may be seen and copies of specification and bill of quantities obtained at above-mentioned offices on deposit of £2 2s. Tenders to T. M. Reed, Clerk, R.D.C. Offices, Northgate, Bridgwater.

PAINTING

July 25.—**FEVER HOSPITAL. London, E.C.**—The Metropolitan Asylums Board invite tenders for the internal cleaning and distempering and external painting at the Eastern Fever Hospital, The Grove, Homerton, E.9, in accordance with specifications prepared by Mr. T. Cooper, M.I.C.E., M.I.Mech.E., Acting Engineer-in-Chief. Specification and form of tender may be inspected at the office of the Board, Embankment, E.C., and the specification and form of tender can there be obtained upon payment of a deposit of £1. The amount of the deposit will be returned only after the receipt of a bona-fide tender, sent in accordance with the instructions on the form of tender, and after the specification has been returned. Tenders, addressed as noted on the form, must be delivered at the office of the Board not later than 2.30 p.m. on July 25.

July 25.—**IN PARKS, etc. Leeds.**—Leeds Parks Committee invite tenders the painting work required at vario parks, recreation grounds, and cemeteri for the Corporation Parks Committ The specifications may be seen and form of tender and schedules of work and particulars may be obtained at the off of Mr. W. T. Lancashire, City Engine Municipal Buildings, Leeds, and contra tors may tender for any or all the co tracts. Tenders, properly endorsed, mu be received at the Town Clerk's Offi Great George Street, Leeds, not later th 10 a.m. on July 25.

July 26.—**PAINTING AT CEMETERY. Hove.**—Painting the extern wood and ironwork of the cemetery lod and chapels; also the greenhouse exter ally and internally, for the Corporatio Further particulars may be obtained at t office of the Borough Surveyor, H. Scott, Town Hall, Hove. Tenders to Jermyn Harrison, Town Clerk, To Hall, Hove.

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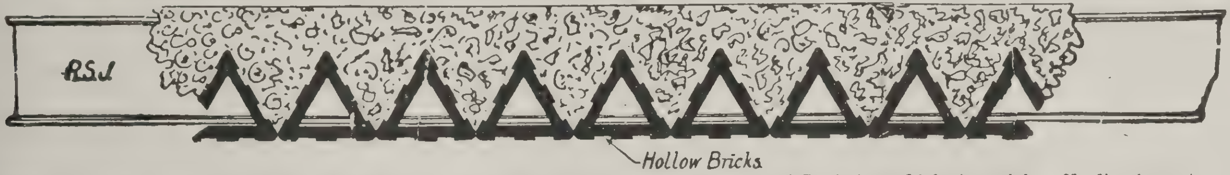

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THE ACTIVATED SLUDGE PROCESS OF SEWAGE PURIFICATION.

At the annual summer meeting of the Association of Sewage Works Managers at Worcester, Dr. Sidney Barwise, medical officer for Derbyshire, in his presidential address, referred to the activated sludge process of sewage purification. The essential difference between purifying sewage by the activated sludge process and the old method of removing suspended matter, whether by purification, subsidence or septic processes, and the subsequent oxidation and nitrification of the organic matter in suspension, he said, was that in the activated sludge process the organic matter in suspension was broken up and oxidised at once by various groups of living organisms in one process. Beyond supplying air to the sludge, innumerable infusoria, amœbæ and other protozoa increased at a great rate. They lived upon the organic matter and split it up, at the some time liquefying, oxidising, and nitrifying bacteria developed in myriads. In this process the changes which take place when sewage was purified on a Dibdin contact bed, and by subsequent treatment on a percolating filter, were consummated in one process at one time. For these changes to take place it was necessary that the sludge consisting of organic matter with colonies of infusoria and bacteria should be stirred up in the presence of air, and intimately mixed with the whole mass of the sewage. When members of the Association were at Sheffield last year, they had an opportunity of seeing an interesting experiment where the stirring up was done mechanically, and where the air was forced into the sewage by an ingenious system of turbines. In Worcester the agitation of the sewage was effected by the air itself, which was blown in for oxidising the sewage.

The question which was the more economical arrangement was one which could only be settled by actual experience. In his opinion unnecessary work was done in forcing the air through porous blocks, and it occurred to him that it would have been better to distribute the air by means of a revolving arm fixed at the bottom of a circular tank, inverting the ordinary process of a percolating filter. As an outcome of the activated sludge process he thought before long they would see a new form of percolating cultivation bed made of something like brushwood laid on a sloping bed of concrete, which could easily be cleaned, or possibly a Dibdin slate bed. The sewage and the sludge would be aerated with compressed air, and distributed over the brushwood or poured into the Dibdin bed. In either case the colonies of confervæ, infusoria, and bacteria grow and automatically fall off. The effluent would contain an enormous quantity of what they call humus, and would have to pass through a settling tank. If tanked sewage applied to a Dibdin slate bed were aerated as it was applied to the bed, he was confident that in many cases no subsequent filtration would be necessary. There were many sewage works which were inefficient, to which the activation of the sludge would make the difference between success and failure. The charm of the process to him was the infinite variety of the method in which it could be applied. Indeed, e rivers might themselves be purified in e ponds above weirs on their courses. T y were at Worcester to give impartial c n sideration and investigation to the or o dox scheme of the activated sludge pro s as devised by Dr. Fowler and as car d out by Messrs. Jones and Attwood in c n sultation with Mr. Caink.

He was exceedingly glad to see that e engineers had the courage to back t ir opinion by putting down works for e city of Worcester on the terms they d done. It was somewhat of a new dep r ture in England for an engineer to de e a scheme and carry it out. This was e usual process in America. If they war d a bridge across a river, a bridge engin r would design and build the structure. n this country an engineer designed a wk and a contractor carried it out. e believed that the American system wa a much better one than the English. e only way in which engineering works we carried out on these lines in England s where the official engineer of a corpo e body prepared a scheme and carried it c.

New Church of St. Germain, Edgbast.

Since the war broke out church-bu ing has been almost stationary, and e new church of St. Germain, Edgbaston s probably the only one in the coun begun and completed during the progr s of the war. The new church has b designed by Mr. Edwin F. Reynolds, a accommodates 670 persons at a cost f £8,400.

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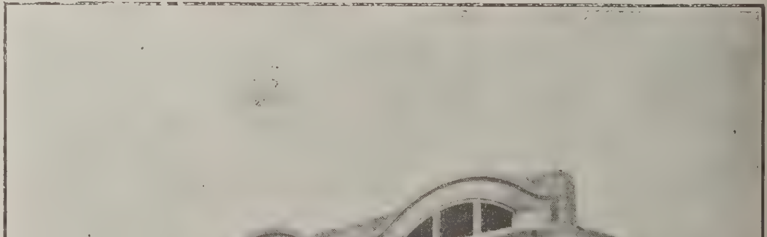

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CONCRETE IN WAR.

Long before the outbreak of the present war, says a writer in "The Times Engineering Supplement," ordinary concrete was widely employed for military structures of many kinds, and particularly in the construction of permanent fortifications. Before the almost irresistible effects of modern high-explosive shells were clearly realised much more faith was reposed in the resistance of plain concrete than is entertained to-day. The comparative ease with which the powerful forts of Liége, Namur, and Antwerp were destroyed by high-explosive shells fired from heavy siege guns came as an unpleasant surprise to the Belgians as well as to the Allies. There is something to be said on the other side, however, for it is reported that investigations have since proved that the concrete in some of the Belgian forts was of distinctly poor quality, and in the case of one fort at Namur, it is said that the material was so inferior that the concrete supporting a steel turret was demolished by a single shell.

An interesting illustration of the utility of concrete in warfare is afforded by the conversion of the island of Heligoland into a powerful fortress and naval base. When this place was handed over to Germany it was chiefly used as a bathing resort, and was rapidly crumbling away under the influence of waves and currents. As soon as it came into their possession, the Germans began to build groynes, breakwaters, and sea walls, in order to arrest erosion, and thousands of tons of cement grout and concrete were filled into crevices in the cliffs, until, to use the words of one who visited Heligoland in 1912, "the island was literally stuck together with cement and ferro-concrete." Further applications of concrete are to be found in fortifications with underground chambers and galleries, and an artificial harbour, capable of affording safe anchorage for an entire fleet. Thus concrete has enabled the Germans to create from a moribund islet what they believe to be an impregnable fortress.

As early as September, 1914, the German positions defending Brussels and Louvain were stated by an eye-witness to for semi-circle of wide radius with reinfo concrete trenches, redoubts, and c works. Early in the following year, w the Germans were in possession of l they began to construct reinforced con trenches, gun emplacements, and she for machine-guns in the outskirts of city. By the end of 1915 the Belgian c between Heyst and Zeebrugge had l converted into a strong artillery posi bv facing the sand dunes and sea wall reinforced concrete and mounting h coast defence guns behind this ramp Later these defences were extxended Knocke, the works including nume massive shelters and also crescent-sha ramparts, 6 ft. high, around several fa converting the latter into miniature f Zeebrugge harbour well illustrates the fulness of concrete warfare, being tected by a crescent-shaped mole 1½ m long by 165 ft. wide, constructed of crete blocks. Although Zeebrugge has peatedly been attacked by British wars and aircraft, the mole has suffered little, the most serious injury being breach reported as a result of the combi attack carried out in May last.

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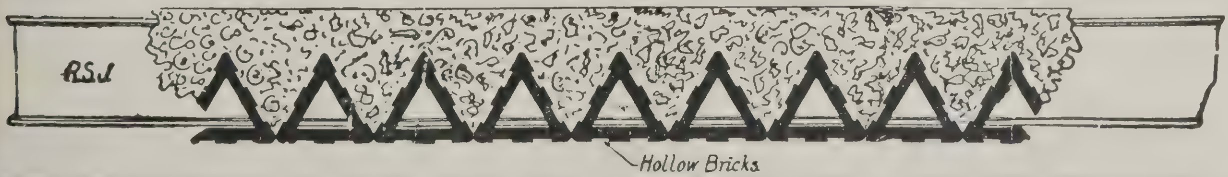

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THE DESTRUCTION OF ST. QUENTIN CATHEDRAL.

Definite information concerning the cause of the destruction of St. Quentin Cathedral is at present lacking, but there is little reason to doubt that we have yet another crime to add to the black record of German vindictiveness in occupied territory. A newspaper correspondent, writing a few days ago, states that, quite unaccountably, so far as he was able to observe, the cathedral suddenly became enveloped in smoke. Soon flames burst forth, and the fire increased in intensity. Towards midnight the imposing building, dominating the plain with its lofty mass, disappeared in the flames, the sinister light of which was seen for nearly twenty miles around. The Germans will not be able to assert that the fire was started by French shells, for, since St. Quentin has been in proximity to our lines, not a French projectile has fallen on the town. The whole superstructure which formed the lofty roof has disappeared. The apse has completely fallen in. It appears that the four walls, blackened by the flames, have alone survived, with the towers breached, jagged, and scorched by fire.

The mental and moral outlook of the German, says a writer in the "Morning Post," seems to be perverted by a kind of criminal astigmatism impossible to correct by the lens, so to speak, which regulates normal intellect and ethics. He regards conduct from a view point hitherto unknown to civilised races. The laws of God and man, the beauty of their creations, are nothing to him, though he blasphemously affects to be the protector of both. He is ever boasting of the services Germany renders to culture. The unfortunate city of St. Quentin affords two instances of the character of his services to culture. In a recent number of the "Woche," Lieutenant Hofmann describes a museum which has been established by the German army in the fortress town of Maubeuge, in France, as a place of intellectual repose for German officers far from the excitement of war, and as a witness to Germany's consideration for culture in the occupied provinces of our Ally.

This museum, once a third-class shop, the "Pauvre Diable," on the Place du Marché, Maubeuge consists of the most important works of art taken from St. Quentin and its neighbourhood, an enterprise carried out by Lieutenant Baron de Hadeln, art historian, and Lieutenant Keller, a Berlin architect. The writer gives a very graphic account of the contents of this "Place of distraction." From the vestibule to the first floor of the house the walls are covered with tapestry representing the most brilliant specimens of the best periods of the art of the Beauvais and Gobelins factories. One room is transformed into an Empire Salon, and its red damask hangings give the fullest value to Canova's marble bust of Napoleon. There are paintings, bronzes, and furniture from the Goulincourt Castle, and the Louis Philippe Salon has splendid French and Oriental carpets, soft and restful, where "the boot of the German rests with joy." The curtains are of yellow silk, chairs are gaily decorated, and the porcelain and pictures are good.

The Cathedral of St. Quentin could not be removed to Maubeuge to save it from the "French artillery," so the Germa themselves have destroyed it by fire. B they first removed from the doomed buil ing a Gothic statue of St. Quentin, t patron of the town, and from t same basilica were taken a charmi "Madonna" and precious stained gla windows.

The most valuable works in the museu at Maubeuge are the wonderful pastels Quentin La Tour, who was a native of l name-town. These portraits of famo French men and women of the eighteen century were the glory of St. Quentin, a are, as Lieutenant Hofmann says, "t most delicate flowers of a refined art," mo than eighty in number, yet, he continu "I did not experience the least fatigue contemplating them." Then he goes eloquently, "these priceless works of a have been placed here [in Maubeuge] sa from the ravages of war. The Germ spirit and German force ever know how safeguard the intellectual patrimo common to all nations." But, as Frenchman remarks: "The world wou better appreciate this eloquent eulogy the services Germany renders to 'cultur if it were not recorded every day in the co muniqués: 'La Ville de Reims a reçu 1,6 obus,'" and he could now add, "if we we not aware of the dastardly destruction the Cathedral of St. Quentin."

It is to be feared that, in ma instances, the art treasures of whi France and other invaded territories ha been despoiled can never be replaced. B the Allies must see to it when dictati the terms of peace that the Germans a made to pay heavily for all the dama they have done.

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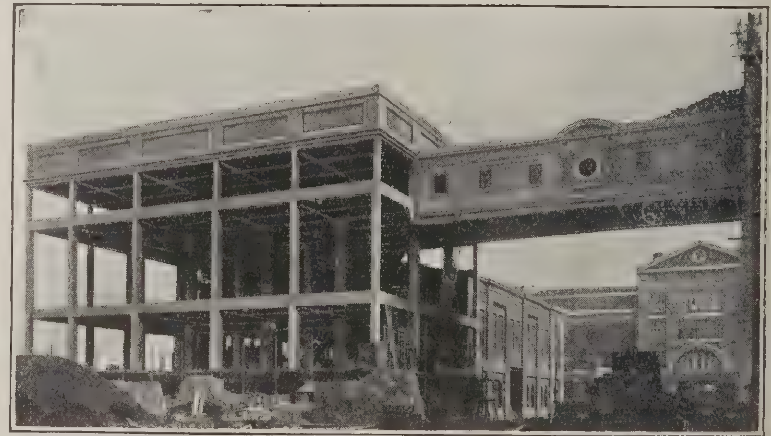

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RICAN CEMENT INTERESTS

Ernest F. Burchard, in a bulletin
d by the United States Geological
ey, on Portland cement, says: Port-
cement is now manufactured in
ty-eight States, those not yet having
e plants for making this important
tural material being the six New
and States, Delaware, the Carolinas,
da, Mississippi, Wisconsin, Arkan-
Louisiana, the Dakotas, Wyoming,
Mexico, Idaho, and Nevada.

e natural raw materials for cement
widely distributed, and there are few
s that do not contain them in suffi-
quantity for the manufacture of
land cement. The distribution of
and cement mills, however, has been
olled for the most part by markets
transportation facilities considered in
ection with adequate supplies of suit-
raw materials and fuel. The large
int of capital required for the con-
tion and operation of a cement mill
ing from 500,000 dollars for a small
to five or six times that amount for
of the larger plants—has necessarily
cted the distribution of honestly-pro-
d plants to localities in which the
ces for success are greatest. In late
competition in the cement manufac-
g business has been very great, and
has further restricted the establish-
of new plants.

e United States produces more Port-
cement than is consumed within the
try, and the raw materials are here
undance. The absolute indepen-
of the industry is assured by the
that everything needed by a fully-
oped cement mill may be obtained in
United States, including pulverising
inery, pebbles for grinding and re-
ory materials for kiln lining. The
er possibility of obtaining potash as a
oduct at many of the cement mills
encouragement to the production of
nt at such mills, even in times when
rofits from cement alone are small.

e year 1914 witnessed the first re-
d decrease in annual production of
and cement in the United States. The
try had experienced a remarkable
h during the preceding ten years,
t was but natural that a slight check
d come at this time. The average
per barrel in bulk at mills decreased
ents in 1914, and the beginning of
var in Europe may be said to have
ed a period of depression in the
rican cement industry, from which
ery was slow at first.

Portland cement industry showed
teworthy developments during 1915,
thstanding the greater activity in the
industries. In 1916 the conditions
much more satisfactory. Higher
prevailed, and six new plants re-
their first production, one each in
rnia, Minnesota, New York, Okla-
, Oregon, and Texas. The plants
regon and Texas are close to tide-
, and the one in Texas is unique in
oyster shells as the calcareous ingre-
of its raw mix.

a result of increased business in 1916
of Portland cement were reduced
normal, yet the reserve of more than
000 barrels on hand at the begin-
of 1917 seems sufficient for emergen-
This reserve, however, should be
ained, and, if possible, even in-
d.

present cement-clinker manufactur-
apacity of the mills in the United
is possibly from 30 to 40 per cent.
greater than the normal consumption, and this surplus capacity seems likely to be maintained through the building of new mills and the enlargement of existing mills. The utilisation of the increased manufacturing capacity is likely to prove an incentive for gaining new trade in the West Indies, South America, and the Orient if shipping is available.

The production of Portland cement in the United States from 1912 to 1916 has ranged between 82,000,000 barrels and 92,000,000 barrels annually, an output far exceeding that of any other country. Average prices have been relatively low, ranging between 80 cents and 1.10 dollar a barrel in bulk at the mills, yielding only small profits, but much higher prices are reported to have prevailed in the early months of 1917.

The imports of hydraulic cements into the United States are normally very small, but in 1916 they were almost negligible, having dropped to 1,836 barrels, compared with 42,218 barrels in 1915.

The exports have never been great, the largest quantity—that in 1912—having been only 4,215,532 barrels. In 1914, 1915, and 1916 the exports were respectively 2,140,197, 2,565,031, and 2,563,976 barrels. These quantities represent less than 3 per cent. of the total production of hydraulic cements in the United States during those years. As recent increases have been due largely to greater exportation to South American countries and the West Indies, it appears that the cement trade is slowly expanding in the direction of greatest promise. The opportunities in these fields were pointed out recently by the Director of the United States Geological Survey.

CONCRETE AND CLAY MANUFACTURES IN THE BOURNE VALLEY.

Members of the Bournemouth Natural Science Society recently visited the Bourne Valley Pottery, where the manufacture of concrete tubes and of bricks and earthenware pipes was exhibited and explained. Mr. Charles Sharp, the proprietor of the works, explained that the members of the society would see two quite distinct branches of the clay industry, namely, salt-glazed stoneware and terra-cotta on one side, and bricks on the other. Then they would also see a third and quite separate manufacture, which he believed was not to be found coupled with that of glazed ware pipes anywhere else in the world, namely, concrete tube making, which the late Mr. Henry Sharp introduced into England in 1875, though with but little encouragement from the engineers of those days, whose knowledge of concrete did not generally extend beyond the coarse material used in foundations. Waste pottery ware, crushed to pea size, was at first used as the matrix, the other portions of the aggregate being clean white sand, water, and Portland cement. Afterwards granite chippings from Guernsey took the place of crushed pottery, but the war has interfered with the shipping of granite. Any short supplies, however, are easily made good with very excellent material from the clay-pits in the shape of the grey flints that are found just below the heather, and which are washed and crushed.

The party were then taken by the works locomotive, "Mars," to the various clay-pits, where they saw the noted "ball clay," which is only found in Dorset and Devon, being cut from its pristine beds. These Poole beds are considered to have been deposited by a river flowing eastwards and bringing the detritus from the granite masses of Devon and Cornwall. Their clays are of the highest military importance in these times, being peculiarly suitable for the manufacture of acid-proof ware. The visitors also saw the flints being automatically screened and delivered into a trolley-pan, which, descending by its own weight to the washer in the valley, drew up the empty pan.

Returning to the works, the concrete tube factory was first visited. Here machinery crushes the flints, mixes the aggregate, and makes the tubes. On the seasoning ground enormous stocks of tubes of all sizes from twelve inches to five feet in diameter were passed through, and a pause was made to see a tube tested to destruction by the "knife edge" test, that is, it had no support at any point of its circumference, but was compressed between two parallel plane surfaces. Under this severe test the tube, three feet in length, only broke when a pressure equal to a concentrated weight of three tons all but 300 lbs. had been attained. Several complete sewer manholes made of "Rock concrete tubes" with patent aquetite base, which only has to be lowered into position and connected with the sewers on either side, were also seen.

Passing on to the brick works, the conversion of the raw clay into wire-cut bricks was seen in operation, and the burning of the bricks by gas in Dunnachie patent kilns was explained, as well as the manufacture of the gas in the adjacent producer. In Scotland large quantities of bricks are burned by gas, but not many in England, and these are perhaps the only gas-fired kilns in the south.

After seeing stoneware pipes tested hydraulically, some reaching as much as 200 lbs. pressure per square inch without breaking, or even leaking or sweating, the visitors passed through the main boiler house and engine room, where some special features of the large Galloway engine interested several members, and then into the pottery. Here in due course were seen the grinding, mixing, tempering, and pugging of the clay, which then passed by elevators to the pipe machine. Following it upstairs it was seen issuing from the machine in the shape of a complete socket pipe, which was then cut off to length, and finished on the wheel, this including the grooving of the socket and spigot. Considerable interest was aroused by the work of the moulders also, who make in moulds by hand articles such as gullies, bends, interceptors, louvre chimney pots, and so on, which cannot be equally well made by machinery.

COMPETITION.

School Buildings at Montevideo.

The "Diario Oficial" (Montevideo) notifies that a competition of plans for the construction of school buildings at Union (Department of Montevideo) will take place in October. Projects will be received at the "Secretaria del Ministerio de Instruccion Publica," Montevideo, up to October 15. Prizes of 1,000 pesos, 500 pesos, and 250 pesos are offered for the best projects submitted. The maximum cost of the construction of the buildings is put at 150,000 pesos. Particulars (in Spanish) as to the buildings and the plans required may be consulted by British firms interested at the Department of Commercial Intelligence, 73, Basinghall Street, London, E.C.2. The peso, at the present rate of exchange, is approximately of the value of 4s. 6d.

PUBLISHER'S ANNOUNCEMENT.

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SANITARIANS' VIEWS ON HOUSING.

Various phases of the housing problem were discussed at the conference of the Incorporated Sanitary Association of Scotland, held in the Masonic Hall, Glasgow, last week.

Mr. Peter Fyfe, chief sanitary inspector, Glasgow, dealt with the problem of the minimum accommodation which should be provided for a working man with a wife and children. He condemned the average existing house of one room and kitchen, in which mixed families resided, and held that no future house for a family should be permitted to be erected in any town which had not a private w.c. convenience, well lighted and ventilated; a scullery, with hot water; a well-ventilated larder, and a store closet. Both in town and country no future house of less than three apartments should be let to any tenant with a family in which both sexes were represented. On ground costing 5s. per square yard, comfortable houses of three apartments could be erected on the three-storey plan, with all the private conveniences suggested, at a net rent of £15 per annum on a pre-war basis of prices.

Mr. Thomas Bishop, sanitary inspector, Leith, agreed with Mr. Fyfe that every house, however small, should be provided with adequate sanitary conveniences; while Mr. Frew, county sanitary inspector, Linlithgowshire, held that there was no use standardising the houses unless they could standardise the individuals. He knew of men who were paying income-tax, staying in single apartments of 1s. 9d. weekly rental. What was wanted was home makers as well as house builders.

Mr. Spiers, president of the Glasgow Houseowners' Association, said the slum was the man, not the house. To deal with such people they must use what Mr. Roosevelt called "the big stick." He questioned if the houses described by Mr. Fyfe could be let at that gentleman's estimate.

Mr. James Thomson, City Engineer, Dundee, dealing with the housing of the working classes, referred specially to the question of tenements as against cottages in city areas. In certain circumstances, he said, there could be no doubt of the necessity for good tenement dwellings. The advantage of cottage dwellings, however, could not be over-estimated, as they provided an almost ideal mode of living, and there could be no good reason for delay by local authorities in acquiring land at low prices and erecting cottages simultaneously if need be with tenements. The main reasons for the limitations of the demand for cottages were low wages, and the ignorance or indifference of certain classes of the community, who, unfortunately, preferred congested and unwholesome areas near busy centres.

In the course of the discussion, Mr. Braid, sanitary inspector, Kirkcaldy, characterised the four-storey tenements as monstrosities which they must get rid of. Two storeys should be the height limit. Mr. P. C. Smith, burgh engineer, Dunfermline, favoured the erection of the two-flatted cottage or two-storey house, and Mr. John Bryce, office of public works, Glasgow, hinted that Glasgow had some schemes up its sleeve in this connection. The two-storey house, with garden attached, and recreation space, would prove to be the cheapest type of house to build.

Dr. Ebenezer Duncan, Glasgow, read a paper on "The Burden of Rates and Taxes on House Property a Bar to the Rehousing of the Working Classes at Ec
nomic Rents." He said that rates a
taxes on house rentals were not only u
just but injurious in respect that they f
most heavily on the poor man with a lar
family. The remedy was quite simple a
easy—abolish house rental taxation, a
place all ratepayers' burdens on the who
realised wealth of the nation in the form
a local income-tax on personal and mo
able estate, as well as on land, and
the houseowner, like every one else,
taxed on the net income he derives fro
his property.

A resolution on the lines of Dr. Du
can's paper was passed.

NOTTINGHAM AS AN INDUSTRIA CENTRE.

Few inland towns present equal adva
tages to those of Nottingham from th
point of view of the manufacturer who
seeking a good site for new works. I
transport facilities are excellent, and th
city is in close proximity to the coalfiel
and to supplies of other raw materials
many industries. An additional induce
ment to establish works in this vicinity
that the Corporation have provided a
excellent supply of gas, water, and elec
tricity for lighting and power require
ments, and that rates are low, while ne
industries are specially dealt with in th
matter of assessment. Although a num
ber of new industries have already bee
attracted to the Nottingham district, man
excellent sites for new works are still avail
able in areas adjoining railways an
waterways. An interesting illustrate
booklet, setting forth these advantages i
detail, is officially issued by the Corpora
tion from whom it may be obtained.

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ELECTRICAL NOTES.

"Illuminating Glassware."

Under this title the British Thomson-Houston Company, nited, Mazda House, 77, Upper Thames Street, London, C., issue a most attractively produced catalogue describing d illustrating a large number of dishes and bowls, globes and mispheres, adapted for various lighting services, and designed a large variety of shapes and patterns. They are made, also, several materials, or modifications of material—of "Velluria, glass without glitter"; of alabaster, Florentine and Tuscan, efully turned and polished so as to display their veining and ts to the best advantage; "Alabas" glassware, the result a series of experiments made with the object of obtaining a ssware which should give, when illuminated, a practically fect diffusion of light with a minimum of absorption; Druid" glassware, which is similar to "Alabas," but less pensive; and "Calla" glassware, which, matt white in colour d of light weight, has an unglazed outside surface with a zed interior to give the utmost reflecting efficiency.

"Velluria," to which the most prominent position in the alogue is given, is a new lighting glassware, which is said represent the result of years of experiment by the most expert ss-chemists. It is made in the form of reflectors, bowls, d spheres. Unlighted, it has the shimmery whiteness of the est Italian marble; illuminated, it has a warm, delicate arly glow, and yields a soft-toned illumination. Its distribu- n and diffusion of light are excellent, and it sheds a warm liance that has the effect of harmonising tones, enriching our schemes, and eliminating hard shadows. It is therefore table alike for show rooms and for domestic interiors; and Veluria shades and globes are, by size, shape, and decorative tures, designed to meet a large range of requirements. They of moderate price. Chain suspensions for these various forms made in a full variety of styles and finishes, from oxidised ver to dark bronze. Very graceful forms are also given to the Alabas" ware, and are, indeed, characteristic of all the amples shown in this interesting list.

Holophane System of Illumination.

Messrs. Holophane Limited, 12, Carteret Street, London, W., have also issued an illustrated account of their speciali- s. In a well-written "foreword" the general subject of umination is usefully discussed. It is shown that the form of ade, globe, or reflector to be employed will depend upon the rpose for which a lamp is required and the nature of the erior it is intended to illuminate; the requirements for a awing-room, for instance, being different from those of a ing-room, or of a shop window, or of an office, or of a blic building. Holophane glassware is so variously designed to meet the most diversified requirements, and new es are continually being designed to meet the ad- nce in illuminants. Sections of the list under notice al respectively with churches, public buildings, offices, bs and hotels, schools, libraries, the home, shop eriors, shop windows, railways, ships, workshops, and miscel- neous services. Clearly the fundamental problem in the anufacture of shades is how to protect the eye from glare ile avoiding an undue absorption of light by the protecting dium. Other details have to be carefully studied, and their termination must often depend on the special circumstances any given case. The Holophane Company have issued com- te engineering data which will assist architects, illuminating, d electrical engineers and contractors in their choice of glass- re for various installations, and the firm are always prepared advise on such subjects. The sections enumerated above all fully illustrated with photographic views, which gain nsiderably in value and interest from the fact that the original otographs were in nearly every instance taken by means of ht derived solely from the Holophane installation.

Illumination in War Time.

In a recent issue of "Electricity" a curious difference in the actice in regard to street lighting in war time in this country d in the United States is noted.

The general tendency here is to reduce illumination to a mini- um, whereas in America we hear of *extra* war-lighting— portant yards, bridges, etc., being strongly illuminated. The planation is interesting. In this country the chief considera- n is precaution against hostile aircraft, while under the gilant action of the police any danger from alien enemies rmally resident in the chief cities has been practically ppressed

In the United States, on the other hand, the danger from air- ids does not exist, but in view of the very large mixed popula- n the possibility of damage by enemy aliens requires con- leration. Accordingly, the intention is to flood all important eas with light so as to render the task of any lurking alefactor as difficult as possible.

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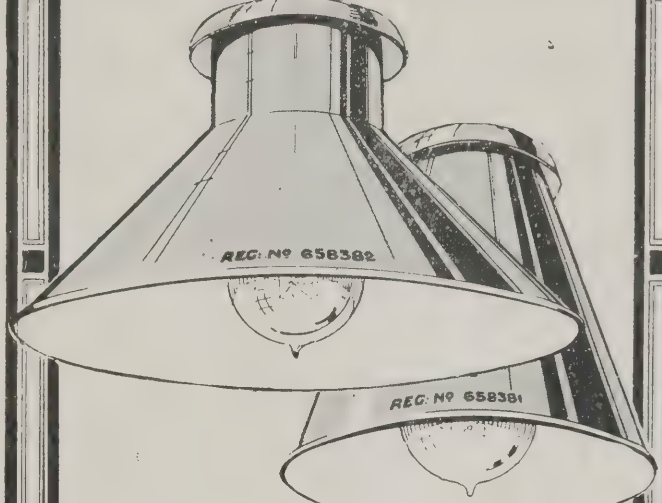

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PAINTING.

September 26. — **CLEANING AND PAINTING. Bootle.**—Tenders are invited for cleaning and painting the outside wood and ironwork of the Town Hall, Municipal Offices, Public Library, and Police Buildings, Bootle. Copies of specification and schedule of work may be obtained at the Borough Engineer's Office, Town Hall. Tenders should be delivered not later than 9 a.m. on Wednesday, September 26 inst.

ROADS & CARTAGE

September 24.—**GRANITE. Romford.**—Tenders are invited for the supply of such quantities as they may require but not exceeding 1,700 tons of granite broken to 1½ in. cube, for the Romford Urban District Council. Tenders, marked "Tender for Granite," must be delivered to Mr. C. T. King, Clerk, Romford, with samples of the materials quoted for, not later than September 24. Forms of tender may be obtained on application to the Surveyor, Council Offices, Market Place, Romford.

September 24. — **MATERIALS. Romiley.**—Supply of sets, kerbs, flags, pipes, macadam, and other materials as may be required during twelve months ending September 30, 1918, for the Bredbury and Romiley Urban District Council. Forms of tender may be obtained from Mr. A. Plunkett, Surveyor, Council Offices, Romiley. Tenders, endorsed "Materials," to be addressed to the Chairman, Council Offices, Romiley, on or before September 24.

September 24.—**MATERIALS. Southowram, Yorks.**—For supply of dross, granite, and tarred slag as follows, for the Southowram Urban District Council: 200 tons of 2½ in. granite to Brighouse Station, 200 tons of 2½ in. tarred slag to Elland Station, 20 tons of dry chippings to Elland Station, 100 tons of 2½ in. dross to North Bridge Station, 50 tons of 2½ in. dross to Brighouse Station. Tenders, marked "Dross, etc.," together with samples (railway companies do not deliver in Southowram), to be sent in by twelve noon on September 24 to Mr. J. Edgar Oates, Surveyor, Council Offices, Southowram.

MISCELLANEOUS

September 20. — **SUPPLIES, Whitchurch.**—Tenders are invited for supplies for the Welsh Metropolitan War Hospital, Whitchurch, near Cardiff, from October 1 next, of turnery, ironmongery, general and furnishing ironmongery, builders' and engineers', asbestos, packing, painters' materials, builders' materials. Forms of tender and further particulars can be obtained an application to Mr. T. B. Morgan, Clerk and Steward, War Hospital, Whitchurch, near Cardiff. Sealed tenders endorsed "War Hospital," tender for ——, to be delivered not later than 10 a.m. on September 20 to J. L. Wheatley, Town Clerk, City Hall, Cardiff.

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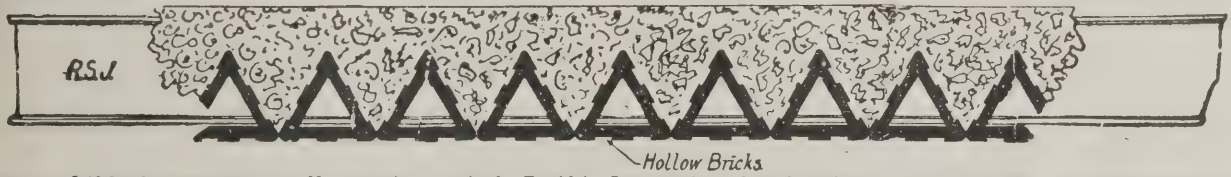

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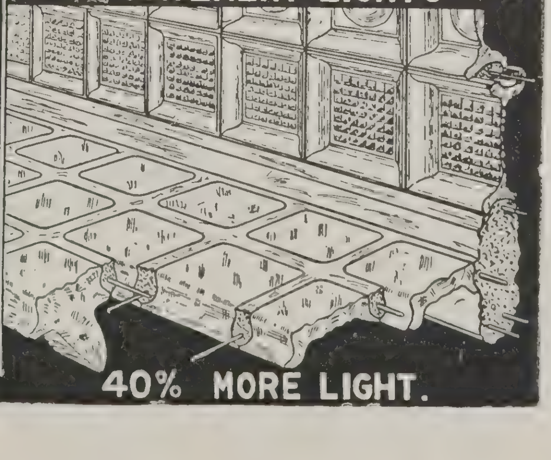

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"IF WOMEN BUILT HOUSES."

Writing to the editor of the "Daily Mail" on this topic, Mr. Sydney Tugwell, A.R.I.B.A., says:—

With regard to the letter from the president of the National Federation of House Builders headed, "If Women Built Houses," women who desire to practise architecture will meet no artificial barriers to their progress: their difficulties will be the difficulties common to the avocation.

That the building by-laws need thorough overhauling and bringing into line with new materials and processes is generally admitted, but one must not look in this direction alone for great improvement in building conditions. The collaboration of women in details of house planning and furnishing will be welcome and valuable, but in working-class houses the dominant factor is their cost. State and municipal effort is liable to relieve the individual occupier at the expense of the community, and equally, I imagine, is it true that the outlay is not directly remunerative in the case of the large manufacturer who erects "garden cities."

A solution of the difficulty cannot, in my opinion, exclude the following conditions:—

(a) Better wages for the workman.

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(c) Standardisation of the component parts of the building and purchase of materials in large quantities; an employer and staff trained in this class of work and having a financial interest in its efficient and economical output.

SUGGESTED SITE FOR THE NEW WAR MUSEUM.

In a letter to the Editor of the "Morning Post" Mr. E. Beresford Chancellor says: In the various letters concerning the proposed War Museum which have appeared in the Press, the question of site has not, I think, been particularly insisted upon. Yet this is a matter of supreme importance and one, as it seems to me, that cannot be too largely canvassed or too carefully considered.

In the one or two instances in which the question has been adumbrated there has been a tendency to suggest some spot in one of the parks as an appropriate one for a building which will be of national importance. May I trespass on your space to put forward a few considerations why such a selection seems to be inadvisable, and to make a counter suggestion as to a site which I cannot but think would more adequately serve the purpose.

The objections to using any of the parks for this purpose are (1) that it is very undesirable that the advantages accruing from these lungs of London should in any way be curtailed, and that the amenities of any of them should be marred by the erection of a large building in its midst; (2) that a precedent, if thus created, might be productive of very unsatisfactory and unforeseen results; and (3) that it seems unnecessary to curtail any of them of their fine proportions when there is another site ready to hand which could not only be a good one for this particular purpose, but which, if thus used, would largely help towards e betterment of London.

The site I suggest is one on the so bank of the river at some point east of new London County Council's buildin now in course of erection. Such a p tion as this would be at once promin and central. Indeed, the existing Gove ment store might be transformed, by construction and the addition of a suita facade, into excellent headquarters fo War Museum. The development of south side of the Thames has alw seemed to me one of London's most cry needs. At present we have a city w only one river bank. By the opening of the other side we should in time poss a London comparable, in this respe with Paris, and in place of the decay wharves and warehouses which to artistic eye (as, indeed, to Whistler th appeared) may seem palaces and ca panili in the night or through the mist, might have stately buildings which wou indeed, be palaces obvious to the trained perception even under the exa ing light of the mid-day sun. We minster Bridge, by its ample width a easy gradient, forms a particularly a quate approach from one side, a Waterloo Bridge serves as well from other, to this area, which should one d especially if the neighbouring Chari Cross railway bridge were removed, ri the north bank and bear contemplati from eyes accustomed to gaze on Somer House.

Nothing, it seems to me, should preve those to whom the betterment and cha of London is dear, from taking every portunity of helping forward the devel ment of the present derelict shore

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SCOTTISH BUILDING TRADES FEDERATION.

The twenty-third annual general meeting of the Scottish National Building Trades Federation was held on October 8 in the Saloon of the Trades Hall, Glassford Street, Glasgow. Representatives were present from Glasgow, Edinburgh, Aberdeen, Kilmarnock, Greenock, etc. Mr. Henry H. Spittal, Glasgow, the president, occupied the chair. In their annual report the Board stated that owing to the necessities of the war the ordinary activities of the trade throughout the country are for the time practically suspended, and only in the most exceptional circumstances may any building work other than what is urgently required for national purposes be undertaken. The report adds that the trade as a whole without demur are accepting the position, and are doing all in their power to prosecute the war in any capacity in which their skill may be utilised. In addition to providing the buildings and other structural work required by the Government, the labour of the trade has been made available to a great extent for the production of many of the implements and munitions of war. Granite workers and stone masons have become steel and iron dressers in foundries and engineering works, joiners in large numbers are now aeroplane makers, and skilled men in every branch of the trade are employed in necessary war work. Reference is also made in the report to the many restrictions and burdens on the trade due to the increase of local and Imperial taxes, and, following on a recent conference, representations have been made to the Government to have the laws affecting building and property-owning radically revised, and the Government have also been urged to consult the trade before any national building schemes are decided upon. The report was adopted, and the following office-bearers were appointed for the ensuing year: President, Mr. Edward Bruce, Edinburgh; senior vice-president, Mr. George Rome, Kilmarnock; junior vice-president, Mr. James Farquharson, Aberdeen; interim secretary and treasurer, Mr. James M. Laird, writer, 163, West George Street, Glasgow, in the absence on military service of Mr. Thomas Ferguson, solicitor, 123, George Street, Edinburgh.

HOUSING AFTER THE WAR.

A conference of Public Utility Societies called by the Garden Cities and Town Planning Association was held at the offices of the Association, Gray's Inn Place, on the housing policy which should be followed after the war. Mr. J. E. Champney, chairman, First Garden City, Ltd., presided, and resolutions were passed stating the terms on which societies would be willing to proceed with building schemes immediately on the conclusion of peace. The resolutions declared: "That grants-in-aid should be made by the Government to societies on the same terms as were granted to local authorities. That in view of the difficulties which will exist in regard to the provision of private money for housing purposes, the proportion of loans from the Public Works Loans Commissioners should be the total value of land, including roads and 90 per cent. the valuation of the houses offered as se- rity. That it is essential that the rate interest on loans to utility societies sho be the same as that charged to local aut rities. That the definition of "work classes" should be extended. That lo authorities should be empowered to as the formation of societies and to adva money to or invest money in societ That local authorities should have po to purchase and develop land and leas to societies or convey it subject t ground-rent, such land not to be limite use as sites for working-class houses. T public utility societies should have po to apply, through some statutory b charged with the duty, for compulsory quisition of land. That specially favo able treatment should be accorded by Government to rural societies.

An Opportunity for Builders' Mercha and Manufacturers.

It is announced that the National Ho ing and Town Planning Council, hav formed a committee to consider inter the question of the equipment of cotta after the war, would welcome suggesti from manufacturers and others for labo saving devices and interior fittings appliances suitable for artisans' hous A full statement of initial cost under mal conditions, the cost of fuel and su other factors as influence the efficiency the installation should be included. Rep should be sent to the minute secretary the committee, Mr. W. Alex. Harv F.R.I.B.A., 5, Bennett's Hill, Birmi ham. We have pleasure in calling attention of our advertisers to this reque

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ELECTRICAL NOTES.

Understanding the "Lumen."

radually—and, indeed, rather rapidly of late years—the ninology of electrical science is being extended, and refined the introduction from time to time of more convenient or re accurate expressions for phenomena that are becoming re clearly understood, at all events in their relation to other nomena. As knowledge increases, many early and tentative ns are naturally discarded in favour of others that seem to resent a closer approximation to truth as more intensive estigation reveals it. "Candle-power," for example, must re in favour of "lumen."

he term "lumen" is becoming more familiar to all branches he electrical trade, and is now in use by the leading manu-urers of Great Britain as the rating for expressing the inous output of a lamp in place of candle power.

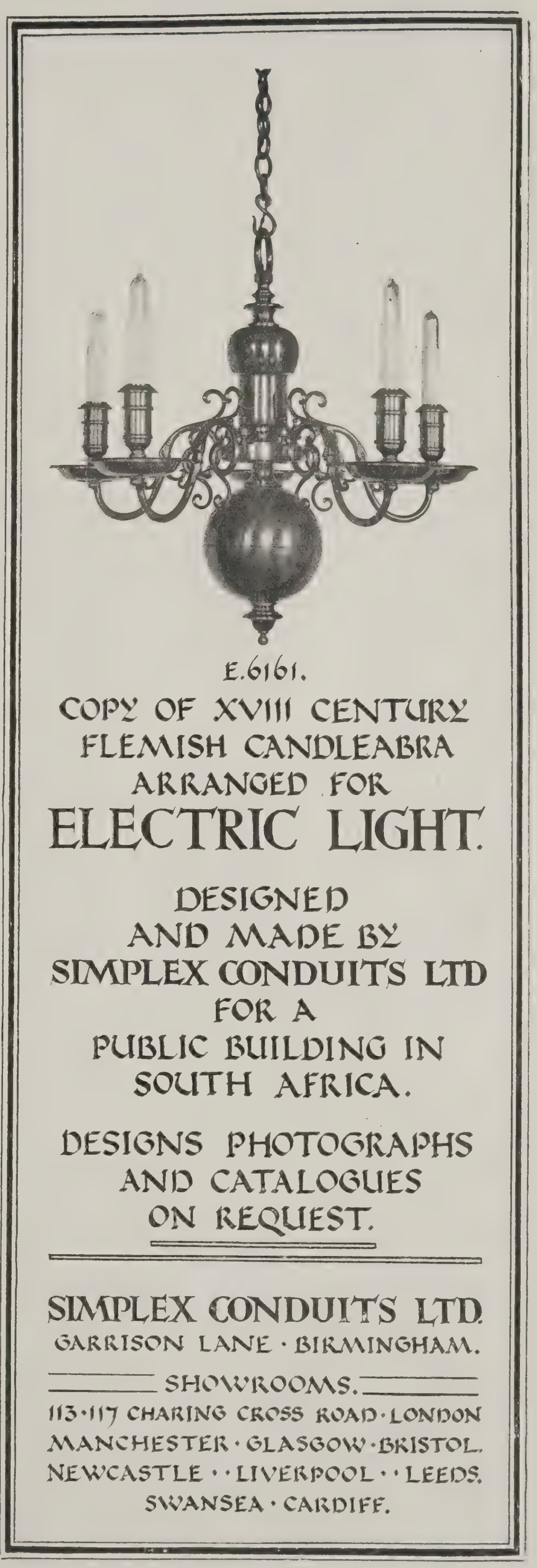
lamp may be regarded as a pump, which uses electricity to np light out from it in so many different directions that the nerous streams (or beams) form a solid "flood" or "flux" ight. Some of the beams, however, are pumped out with ater force than others, which causes the lamp to give a nger light in some directions, and no light at all in others. force or strength of the beams in any one direction may be n to represent the candle-power in that direction. It is nifest, therefore, that this candle-power (expressing the one ction force of beam) cannot be a really accurate full measure he amount of light that is being pumped out by a lamp in directions.

ith the old method of rating lamps, by expressing the light ue in candle power, we simply stated the average force of the beams pumped out from the lamp in one direction, i.e., horizontal direction (with the lamp hung tip down). No sideration was given to the light pumped out in other direc-s. One might have two lamps of the same candle-power, of which gave little or no light in other directions than the izontal, while the candle-power of the second lamp was a imum in the horizontal direction. Inasmuch as lamp fila-nts are now being made in numerous complicated shapes and ms, each form producing different distributions of light, and further, as few lamps are now being used except with des or reflectors which modify the distribution of light still e—realising all this, some other rating than a mere one-ction intensity is necessary properly to express the actual t output given by a lamp.

or these reasons the "lumen" has been adopted, as it ex-ses in an accurate way the value of the total light flow from lamp, just as a unit of water pumped is expressed accurately he gallon flow per minute. We can say "this lamp erates 600 lumens," just as we would say "this pump de-s 600 gallons per minute." As some pumps require more er than others to make a given delivery of water, so some ps require more energy (watts) than others to generate the e number of lumens of light. Here we have an expression the efficiency of a lamp, i.e., "lumens per watt."

either the lamp rating in lumens nor the "lumens per t" efficiency can be altered by any change in the shape of filament or the use of reflectors, or other change in the dis-ution of the light. The lumen values remain the same, and ays express the actual total light flow from the lamp. The men" is a better unit than "mean spherical candle power," "mean spherical candle power" is only an imaginary ntity, and its determination or calculation is a very tedious ess. When you have the mean spherical candle power you not apply it in a useful way as you can the lumen. The en immediately enables one to determine the degree of illu-ation given by a lamp. By its definition, the lumen "is the unt of light which will illuminate 1 sq. ft. of surface to the nsity of 1 ft. candle." Therefore, knowing the number of ens, we immediately know the degree of illumination in -candles on the surface illuminated.

he "lumen" has been adopted by the engineering societies lamp manufacturers of the United States and Canada, and its adoption by the leading British lamp manufacturers its is becoming more and more widespread throughout the ld.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October 22. — STREET WORKS. **Bedwellty.**—Private street works at Gelynos Road, Gelynos Avenue, and Penylan Avenue, Argoed, for the U.D.C. Plans and specifications may be seen, and forms of tender and bills of quantities obtained, upon application to Dan H. Price, Surveyor to the Council, Aberbargoed. Tender to T. J. Thomas, Clerk to the Council, Clerk's Office, Bargoed.

SANITARY ENGINEERING.

No date. — MAIN, ETC. **Loughborough.**—Excavating for, laying in and jointing 22-in. cast-iron condensing main pipes along the canal bank, Bridge Street, etc.; also construction of intake and discharge chambers, together with all appurtenant works, for the Electricity Committee. Bills of quantities and form of tender may be obtained on application to A. H. Walker, A.M.I.C.E., Borough Surveyor and Waterworks Engineer, Town Hall, Loughborough, on deposit of £1 1s. Fair wages clause.

MISCELLANEOUS

November 5.—GREY PAINT. **Johannesburg.**—The Imperial Trade Correspondent at Johannesburg has forwarded a copy of the specification and tender form in connection with a call for tenders by the Johannesburg Municipal Council for the supply and delivery of 400 imperial gallons of grey paint (contract No. 289). Two sample tins, each containing 1 lb. of the paint offered, must be delivered to the Controller of Stores not later than the time for the receipt of tenders. Copies of specification, conditions of contract and form of tender may be obtained from, and sealed tenders on the proper forms will be received by, the Town Clerk, Municipal Offices, Johannesburg, up to noon on November 5. A copy of the specification, etc., may be consulted by British manufacturers at the Department of Commercial Intelligence, 73, Basinghall Street, London, E.C.2.

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27-29 TOTHILL STREET, WESTMINSTER,
LONDON, S.W.1.

HOUSING REQUIREMENTS A NEWPORT (MON.) AND NORTHAMPTON.

The sanitary authorities of New (Mon.) have presented a report to Housing Committee showing that th was overcrowding in 1,607 of the house the town. The Local Government Bo requirement was 500 cubic feet per ad and 200 per child. It was decided to inf the Local Government Board that 1, houses were wanted.

The principal business at last we meeting of the Northampton To Council was a discussion on the report the Housing and Town Planning Co mittee, which had decided to intimate the Local Government Board that it probable that 500 houses would be requi to be built in Northampton at the end the war. Attempts were made to get number increased, but various ame ments were defeated.

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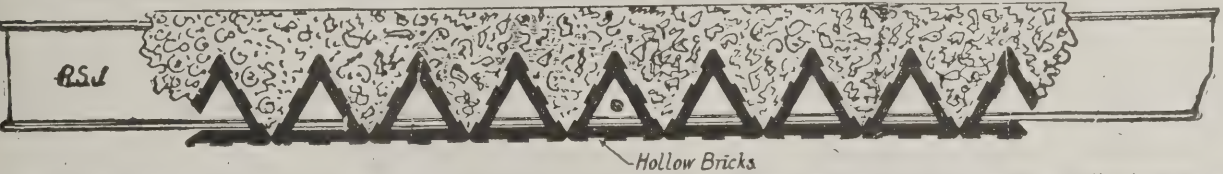

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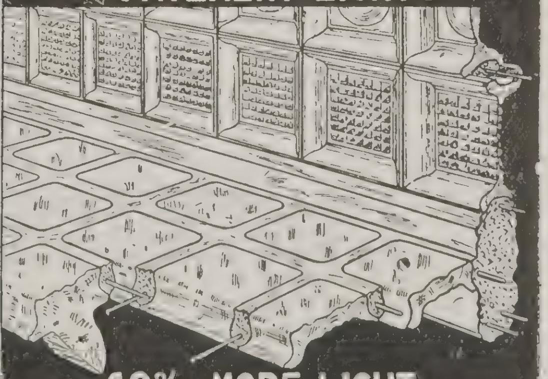

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WAR MEMORIALS.

Memorial to Major J. A. Bloomfield.

A tablet to the memory of Major J. A. Bloomfield has been unveiled in the Church of St. Margaret, Cannon Place, Brighton, by Colonel J. Turton, who spoke of the valuable services and high character of Major Bloomfield in the Crimean Campaign and afterwards in the Territorial Forces, and mentioned that he was the first, in the year 1885, to introduce the use of bicycles into the Army for military purposes.

Sculpture at Barnet.

A war memorial of a rather unusual character has been dedicated in Barnet Vale. It takes the form of a figure of St. Mark (the patron saint of the parish) in a niche over the porch of the church. The figure was carved by Mr. N. Hitch under the direction of the architect of the church, Mr. F. L. Pearson. It was erected in memory of Trooper Norman Child, who fell in Gallipoli, September, 1915. He was one of the communicants, and his father has been organist of the church for many years.

Australian Memorial at Amesbury.

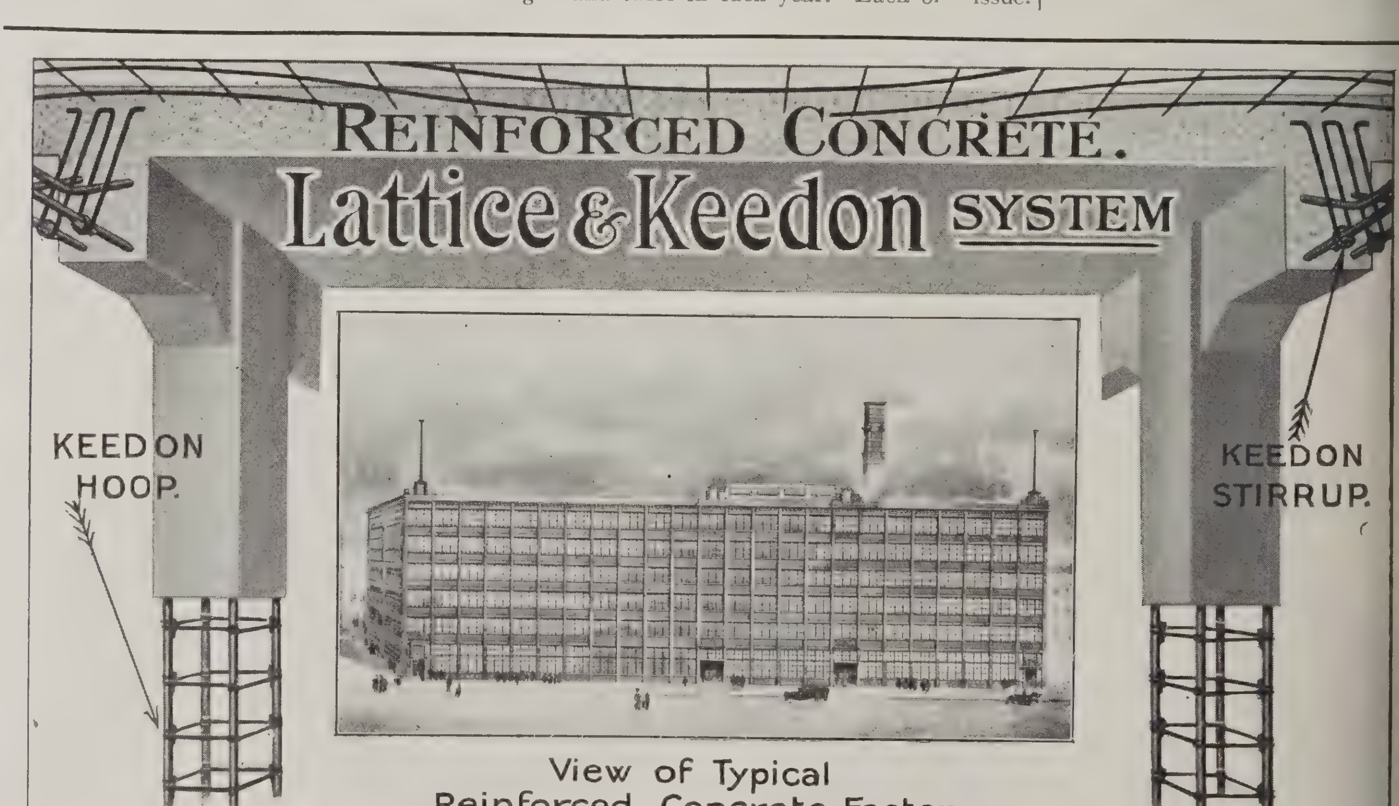
The Bishop of Salisbury has unveiled a memorial to the men of the 1st Training Battalion, Australian Imperial Forces, which has been erected at Durrington, near Amesbury, Salisbury. It takes the form of a massive obelisk and bases, in the rugged red Scotch granite, standing altogether 15 ft. high. Below the inscription is the text: "Greater love hath no man than this, that a man lay down his life for his friends." The arms of the Australian Commonwealth are finely modelled and cast in bronze.

ARCHITECTS AND NATIONAL SERVICE.

Following are a few more points from Mr. John B. Gass's presidential address to the Manchester Society of Architects, part of which was reproduced in our last issue. Government Departments, he said, were notified by Mr. Chamberlain of the services architects could render, but the cold response of the War Office, particularly to the profession, whose very name was disallowed in their organisation, led to a very unsatisfactory response. Perhaps, however, the little more consideration given to members of our profession during the past year may have been the outcome of the deputation.

There has also been an awakening among the allied societies during the past year and much necessary activity has been displayed by them. In the Institute War Committee's proceeding great interest was taken, and the allied societies were fully represented in the deputation in London to Mr. Neville Chamberlain. After the deputation the representatives met together, and an allied societies conference was arranged to be held in Manchester. There was a special meeting to consider the housing question on March 31 last, when the constitution was decided on, and the first general conference was held in our society's rooms on April 18. The constitution of the Conference states that "the objects are to strengthen the position of the profession, the Institute, and the allied societies in the world of affairs, and, to aid and encourage architecture as a living and vital force in the national life." Conferences are to be held in various districts as may from time to time be arranged and twice in each year. Each of the allied societies will have three representatives. Manchester was agreed to be the headquarters, and Mr. Isaac Taylor, F.R.I.B.A., our society's hon. secretary, was appointed general hon. secretary with an associated hon. secretary in the district in which the conference is held. The president of the society in whose district the conference takes place is to be the chairman of it, and an executive committee was formed of presidents of the Birmingham, Leeds, Liverpool, Manchester, Nottingham, and Sheffield societies. At the General Conference exceedingly interesting papers were read and animated discussion of much value followed. Resolutions were afterwards submitted by the Executive to the Institute embodying the general feeling of he allied societies. At a special meeting of the Council of the Institute held on June 18 the resolutions received sympathetic consideration and a joint committee was formed composed of very representative members of the Institute and the presidents of all the allied societies with a view to consultation on matters of general interest and importance to the profession, though the proceedings are to be considered informal. The first meeting of the Joint Committee was held in London on Thursday, October 4, and was well attended, and the second meeting is to be held in Manchester on Wednesday, December 12. I believe it is the first time in the history of the Institute that such a conference has been held in a provincial centre.

[Further extracts from Mr. Gass's presidential address are held over. The address is of considerable length, and we regret that the war-time restriction of space prevent our giving it in its entirety in one issue.]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LATE CONTRACTS, ETC.

MISCELLANEOUS.

November 1.—**STORES, London, E.C.** —Supply of the following stores, for the Great Indian Peninsula Railway Company: Steel tyres for carriages and wagons, helical springs, spare parts of carriages and wagons, wheels and axles, tyre retaining rings, Yorkshire iron screw couplings. Specifications and forms of tender may be obtained at this office on payment of fee for specification, which payment will not be returned. Tenders must be delivered to R. H. Walpole, Secretary, Company's offices, 48, Copthall Avenue, London, E.C.

CEMENTING A COAL-PIT.

One of the greatest struggles in connection with the sinking of the new pit at Keresley, near Nuneaton, has been (says a writer in the "Midland Tribune") the remarkable battle which the engineers have had with the huge volumes of water that were met with. At first the difficulty was dealt with by means of cast-iron tubbing. In one shaft 160 ft. of tubbing was put in from a depth of 148 yards, and the water shut off amounted to 1,100 gallons per minute. In the second shaft two lengths of tubbing were put in—a length of 130 ft. from a depth of 152 yards and another of 60 ft. from a depth of 183 yards, shutting off 2,670 gallons per minute. But the difficulty was not to be overcome in this way, for on the resumption of sinking operations water was met with again.

It was then decided to try the cementation process of shutting off the water instead of by cast-iron tubbing. A concrete plug, 20 ft. thick, was placed by a Belgian contractor in the bottom of each shaft. This shut off completely the water, and allowed of boring twelve holes in each shaft for the injection of cement from the bottom of the shafts.

By May, 1915, 153 ft. of ground had been treated below the plug, and sunk through one shaft, with the result that only 75 gallons of water per minute was met with, instead of 1,100 gallons before treatment. The effect in the second shaft was even more striking, for there the same depth of ground had been treated and twelve yards sunk through, practically no water being met with, instead of 2,600 gallons per minute before treatment. By utilising the system of sinking through the water-bearing strata by the cementation process, it was eventually possible to obtain perfectly dry shafts.

It has taken about five and a half years to sink the shafts. They were started upon in March, 1912, and have only just been completed, or practically so. The area of the coalfield acquired is about 500 acres and extends to the parishes of Keresley, Corley, Exhall, etc. The colliery is being equipped to deal with an output of 4,000 tons a day.

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ELECTRICAL NOTES.

The Care of Motors and Generators.

British machinery has achieved a reputation for quality and
neral efficiency that is second to none in the world. With
eful treatment it may be reasonably expected to last until,
e the "one-hoss shay," it falls to pieces through sheer old
e. Yet how often does it receive that care and attention
ich are an elementary necessity if it is to perform its func-
ns efficiently? Seldom, it would seem. Neglect in most
es is not intentional, but is due rather to an inability to com-
hend simple but essential requirements. In the hands of
expert, of course, machinery is perfectly safe; but in these
's the most delicate mechanism is often unavoidably en-
sted to individuals who are more or less unskilled—or in any
e only partly skilled—and, if there be no properly alert
ervision, disaster is a by no means remote possibility. The
d for careful printed instructions in these circumstances is
ious. This fact has been thoroughly appreciated by the
tish Westinghouse Electric and Manufacturing Co., Ltd.,
have issued a most useful little booklet giving detailed
ructions with regard to the installation, care, and repair of
ir motors and generators. The following paragraph,
cted at random from a section entitled "Operation and
e," will serve to show the practical value of the information
en:

A Summary of Practical Advice.

In general, keep electric generators and motors clean and
; cleanliness and freedom from dripping water, oil, grease,
, etc., are very important. Keep all such articles as tools,
s, oil-cans, etc., in their proper places and not lying loosely
und the machines or on the frames. Where it is likely
foreign matter will get into the motor, semi-enclosing or
lly-enclosing covers should be used. Dust-proof attach-
nts can also usually be supplied. After the machine is
unted and all mechanical and electrical connections are
pleted, a final careful inspection should be made before
ting. When satisfied that all instructions have been fully
plied with, start either without load or with light load,
pt on series motors; which should always have enough load
old the speed of the motor down to a safe value."

he booklet is full of useful tips such as those quoted above,
a copy of it should be in the hands of all who possess, or are
usted with the running of, electric motors and generators—
ht, indeed, with advantage be set out on a card to hang up
garage walls.

Projective Lighting.

simple form of flood-lighting projector, fitted with a half-
type lamp, has been widely adopted in the United States
Canada for the purpose of protection to industrial plants
factories, shipyards, docks, bridges, and wharves, open
s and approaches, power plants, coal piles, and storage
ls, buildings located in open areas, railway termini, and rail-
yards, camps for prisoners, etc., and, from the number of
pes this year of German prisoners from English prison
ps, it would appear that flood lighting with electric incandes-
lamps in floodlight projectors would serve a useful purpose
ssisting the guards to watch over prisoners and prevent such
pes. These floodlight projectors can be made to give all
eties of light distribution, from the long projective ray to
oad-angle distribution to cover a wide area, so that broad
s as well as narrow strips can be easily illuminated.

Standardisation of Voltages for Electric Lighting.

eports from Canadian and United States lamp manufac-
rs show steady progress in the standardisation of lamp volt-
. The chief voltage range in use in Canada and the
ted States is 100-130 volts, and in this range the voltages
dardised are 110, 115, and 120. In this way the lamp in-
ry in the States is replacing the 25 or more voltages in
range with the three-standard voltages stated. It is not
ssary to enlarge on the great advantage this will be to the
industry and the electrical trade and to the lamp con-
ing public. This is a very desirable standardisation. A
lar reform of the voltages of Great Britain would be equally
ficial to the trade and the public. Great Britain not only
100-130-volt lamps to supply, but a further—and even
ter—demand to supply in the additional range of 200-260
. It would be an immense improvement if standardisation
d be effected in Great Britain so as to limit the lamp volt-
to 110, 115, and 120 in the low-volt range, and 220, 230,
240 in the high-volt range.

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November 17.—**COTTAGE. Oxford.**—Extensions of cottage at the sewage pumping station, Littlemore. Plans and specifications can be seen at the offices of the City Engineer, Town Hall, Oxford, to whom tenders must be delivered.

MISCELLANEOUS.

November 15. — **RETORTS, ETC. Bradford.**—Supply of gas retorts and firebricks and fireclay required in the fixing of such retorts during the year 1918, for the Corporation. Form of tender may be obtained on application to C. Wood, Gas Engineer, Town Hall, Bradford. Tenders must be sent to F. Stevens, Town Clerk, Town Hall, Bradford. Fair wages clause.

November 29. — **STORES AND MATERIALS. Nottingham.**—Supply of the undermentioned stores and materials, contracts to commence on January 1, and to terminate on December 31, 1918: (A) Cement; (B) blue lias lime; (C) red bricks; (D) blue bricks; (E) timber; (F) stoneware pipes, etc.; (G) stoneware pipes, etc. (patent joints); (H) iron castings, iron gulleys, etc.; (I) Yorkshire flags, kerb, etc.; (J) granite setts, kerb, and broken granite; (K) ironstone slag, chippings, etc.; (L) river gravel; (M) coal; (N) picks, shovels, scoops, etc.; (O) ironmongery; (P) scavenging and other brushes; (Q) disinfectants; (R) refined tar; (S) pitch; (T) creosote oil; (U) plumbing work (for two years). Forms of tender may be obtained on applying to Arthur Brown, M.Inst.C.E., City Engineer, Guildhall, Nottingham, on deposit of 5s. each. Patterns and samples may be inspected at the Eastcroft Depot, London Road, Nottingham. Tenders to be sent to W. J. Broad, Town Clerk, Guildhall, Nottingham. Fair wages clause.

December 1.—**STORES. Enniskillen.**—Supply of the undermentioned stores for twelve months from January 1 to December 31, 1918, for the Sligo, Leitrim, and Northern Counties Railway Company: Brooms, broom handles, brushes, ar mats, No. of form, 1; beater shafts, adz hammer, and sledge handles, 2; unifor clothing, oilskin coats, leggings, and Sou westers, 3; brass sheets, copper plate rods, tubes, wire, tin, spelter, and zinc, canvas, 5; cotton, waste, wick, and spong cloths, 6; cement, slates, sewer pipes, fi bricks, etc., 7; colours, etc., ground in oi 8; iron castings, 9; carriage and ax guards, buffers, plungers, cradles, hinge and drawbar hooks, 10; American clot flags, worsted, and flannel, 11; drysa teries, 12; edge tools, saws, files, to steel, and implements, 13; galvanised ir sheets, buckets, cans, emery, etc., 1 glass plate, sheet, lamp chimneys, ar gauge glasses, 15; hinges (wrought iron locks, keys, and hardware, 16; indi rubber goods, 17; wire and wirework, 1 iron and brass screws, split pins, coa screws, and belt fasteners, 19; iron—con mon English, bars, best Lowmoor iro bars, Swedish iron, bars, and iron fie gates, 20; leather, belting, chamois, etc 21; lamps, brass, carriage fittings, and fc signals, etc., 22; lead (ground in oil ar dry), sheet, etc., 23; nails, 24; oils, 2 permanent-way fastenings, 26; pressu gauges, 27; rope, twine, and flag, 2 engine, carriage, and wagon spring spring steel, etc., 29; tin plates, 30; ele tric telegraph materials, 31; crossings fc steel flange rails, bull-head switches, etc 32; timber, 33; varnishes, 34; wago bolts, nuts, and bolt ends, 35; plumb work, etc., 36. Forms of tender can b obtained from the Secretary on payme of 1s. each. Tenders must be for th supply of goods in accordance with th company's patterns; these patterns may b seen at the General Stores Depot, Mano hamilton (they cannot be sent away fc inspection). Tenders should be deliver to John Duff, Secretary, Secretary's Offic Enniskillen.

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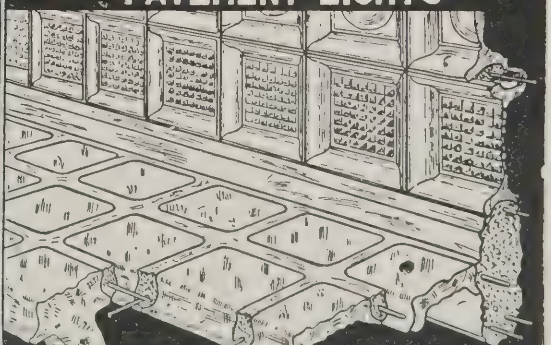

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CURING A FLOODED STOKEHOLE IN A MANSION.

A famous Elizabethan residence in Somerset, the residence of a distinguished nobleman, is in part built over a subterranean stream. Sixty years ago, when the first heating apparatus was installed, the builders of the stokehole had considerable difficulty in placing it in the sunken position which stokeholes usually occupy —for the stream was found to be flowing under the situation required. After considerable trouble had arisen, an iron tank was made sufficiently large to contain the boiler and furnace. In Victorian times this was the only way to stem flowing water from stokeholes, and several mansions have similar tanks.

In the mansion referred to an additional stokehole was recently sunk adjoining the one described above. The estate agent and the clerk of works are alert to modern methods, and, having had considerable experience with waterproofed cement, they determined to make a very drastic test of this modern method of obtaining dry interiors. The estate fire-engine was utilised to divert the flowing water from the excavations of the new stokehole. The water was kept away while the work was proceeding, and for seven days and nights after the work was done, to enable the cement to set.

Fine Pudloed concrete was laid on the floor, but the brick walls were only rendered with Pudloed cement mortar. The tenacity with which cement plaster holds to an absorptive surface like common red brick is usually so great that after it has once set a considerable exterior pressure of water is required to force it off the wall. In this stokehole the reliance placed upon the wall rendering has been fully justified, for, in spite of the constantly flowing water, the walls are as firm and dry as the floor. The clerk of works emphasises the following essential points for cement waterproofing flooded work: (1) To keep the water away until the cement sets, (2) to use small non-porous aggregates, (3) to use coarse washed sand for the renderings.

War Damage Compensation.

The then Lord Mayor, Sir William Dunn, presided at an influential meeting at the Mansion House of the Committee on War Damage, called to consider the Government scheme for giving compensation for war damage without insurance. He stated that the scheme fell so far short of what they had a right to expect from the promise given them by the Prime Minister that they could not be content with it. Mr. Mark H. Judge, chairman of the committee, moved the following resolution: "That, while we welcome the new scheme, in so far as it provides from national funds compensation for war damage to property up to £500, those present at this meeting are greatly disappointed at this insufficient outcome from the Prime Minister's reply to the committee on July 13 last, especially as all sufferers prior to September of this year and all sufferers in person have been entirely left out of account. In our opinion the scheme is so unsatisfactory as to call for immediate reconsideration by the Government, and we hereby ask the Prime Minister to grant our deputation another interview with as little delay as may be." This was carried unanimously.

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THE FUNCTION OF AN ARCHITECTURAL SOCIETY.

AN ADDRESS TO THE R.I.B.A. BY MR. SIDNEY WEBB.

HE first of a series of informal conferences arranged by the Royal Institute ritish Architects for the 1917-18 ses- was held on Thursday last at 9, Con- Street, when Mr. Sidney Webb ered an address on "The Function Architectural Society." Mr. Henry are, the president, was in the chair.

. Webb prefaced his address by re- ing that he knew nothing whatever t the architectural profession, and the estions which he had to make would from another standpoint. He had en a sketch of the Institute in the se of a study of professional associa- , and that was his apology for address- he members at that conference. As of them knew, his wife and he had interested in trade unionism for many , and he had noted that during the ten or twenty years there had been a revival of what he might call voca- lism in the world, especially in ce, this country, and America. By ionalism he meant that feeling that vocation or trade to which a man ged had with it much more in non than the parish, or city, or even ountry to which he belonged, and therefore he ought to associate very more with people of his own craft or wn vocation than merely with his geo- nical neighbours. In view of that g in the world, the structure or ion of such professional organisations isted became of considerable interest ore than their own members.

e R.I.B.A., it was interesting to e, was established in 1834, after forty years of feeble forerunners e kind or another, and his researches shown that all professional associa- of brain-workers in this country had their start since the beginning of ineteenth century. Like many other -workers' associations. the Institute ot start as a professional association e modern sense. It began as a sub- association. At the commencement, usiness of the Institute was not to after architects—it was to promote ecture, and therefore it included nly architects, but other people in- ed in architecture. Like other pro- nal associations the Institute had ed a large amount of time to profes- education, and had given a good of thought to the subject of profes- registration.

fessional associations, Mr. Sidney said, commonly discovered three im- which had led, generally speaking, ir formation. The first was what he call the creative impulse—the desire mote the art or the science to which embers belonged. That desire was lly at the beginning of most of the sional associations. At the begin- of the nineteenth century, professional ations were looked on very much ce—they were almost considered to conspiracy against the public, and ore the very admirable impulse of ving the technique of the profession a very excellent starting-ground. with that came the fellow- mpulse—the desire of every man to ate with his kind; and out of that se had grown the benevolent funds ther agencies for bringing members rofession together for mutual help. hird impulse, which was perhaps not so wholly good, was what he might call the possessive impulse—that was the desire of the profession to get as much out of the community collectively as it could for its members. It was those three impulses which had given rise to the R.I.B.A., as to other professional associations. As to the results which had sprung from those associations, as far as he could see in the case of their own Institute as in other brain-working professions, they had resulted in a very considerable elevation of the profession. At the commencement it was the rank and file of the members who were seized with a desire for association; but later on the heads of the profession came along and threw their weight into the work. There could, he thought, be no doubt that the architectural profession to-day stood very much higher in the estimation of the public than it did fifty or a hundred years ago, and that was very largely owing to the long-continued efforts of the Institute. He did not wish to say anything about the improvement in architecture, as he was not qualified to judge on that point; but one could not help noticing that the efforts of the Institute for architectural education had at any rate made their mark, and that the "rank and file" architect was a considerably better educated person than was the same man one hundred years ago.

He had not yet, he said, seen his way out of the dilemma in which the architect was placed by being paid on a percentage on the gross cost of the building on which he was engaged, the lecturer said that in his opinion the chief fault of professional associations was their tendency to exclusiveness. That exclusiveness took various forms, and there was one form in particular which he regarded as very injurious. Had it ever occurred to them that, speaking roughly, all the professional classes had been drawn from about 10 per cent. of the population only—those who had received a secondary school education? By that means they had necessarily excluded the potential geniuses who belonged to the other 90 per cent. of the population, and there could be no doubt that the practice had led to a large amount of professional skill going to waste. It was quite right for a profession to insist upon a certain amount of education and apprenticeship training of some sort or another, but in some professions the training was made unnecessarily long. Another much more serious exclusiveness was that, as they knew, every profession tended to be governed by the elderly members—by the man of fifty-eight and upwards. He suggested that as a result there was a tendency in professional associations to ignore the new technique and the new methods which the average older member was not acquainted with.

What was the proper sphere of an architectural society? They would have gathered from what he had said that it was founded on the creative impulse, and it ought to aim at promoting that vocation. It should be strengthened by the fellowship impulse—it should always keep that in view. With regard to the possessive impulse, its members would always endeavour to get as much from the community as they possibly could, but in his view all they were entitled to from the community was enough to maintain their service at the highest point of efficiency; but naturally in estimating what that was their bias would be to get as much as they could. The fundamental principles of a professional association must be to promote its art in all sorts of ways. It must stand up for the profession, and insist upon its having its proper place in the world. Then an architectural association, like any other professional body, was entitled to claim participation in the government of the profession as regarded conditions of entry, training, etc., but he did not think that any profession could be allowed wholly to govern itself. It must work with the State in fixing the conditions of entry. A professional association ought to take a large part in prescribing the conditions of entry and of training, but they could not give it complete power—first, because the leaders were not up to date, and also because they might prescribe a training which they thought was in their own interests, but which ran counter to the interests of some other profession or to the interests of the community at large. A second function of a professional association was one which was not often exercised—and that was, it ought to claim the right and the duty of criticising everything that was done by t Government or by any public department on the lines of its own profession. The professional association ought to regard it as its duty to inform the Government of the professional opinion upon every kind of act done by it on which the profession had a distinct opinion. He would like to see it the duty of every professional association to keep a constant supervision over the acts of any Government department falling within the realm of the profession, and to put that criticism publicly on record. He would even go further, and say that he thought the Government ought to have a professional advisory council in each profession, to make reports which should be laid before Parliament. He would not, however, give such an advisory council any powers.

He thought it was the duty of every professional association to supply a sufficiency of its service to the community as a whole. Practically all the professions began as a body service to the rich; they had developed out of that to become the servants of the community, but they had not yet managed to make their service available for the whole of the community. Take architecture. In the early days of that Institute architecture was thought of only as the luxury of the rich, and even down to the end of the nineteenth century it was possible to say that all buildings did not require an architect, but only those buildings which were expected to be beautiful. That seemed to him to be an altogether unworthy view of the profession. In his opinion, architects should say that they ought to be responsible for all buildings, and in buildings he included town-planning. It ought to be the aim of the architectural profession to claim that the service which they could render should be supplied in sufficient quantity to be available for all the building and all the town-planning of England. It was a reproach to the architectural profession whenever they saw a house badly built, and it was a reproach to the profession that any town in the country should be badly laid out.

Mr. Vernon Crompton proposed a vote of thanks to Mr. Sidney Webb, and Mr. Wigglesworth seconded; Mr. Maurice B. Adams, Mr. H. V. Lanchester, Professor Lethaby, and the Chairman supporting.

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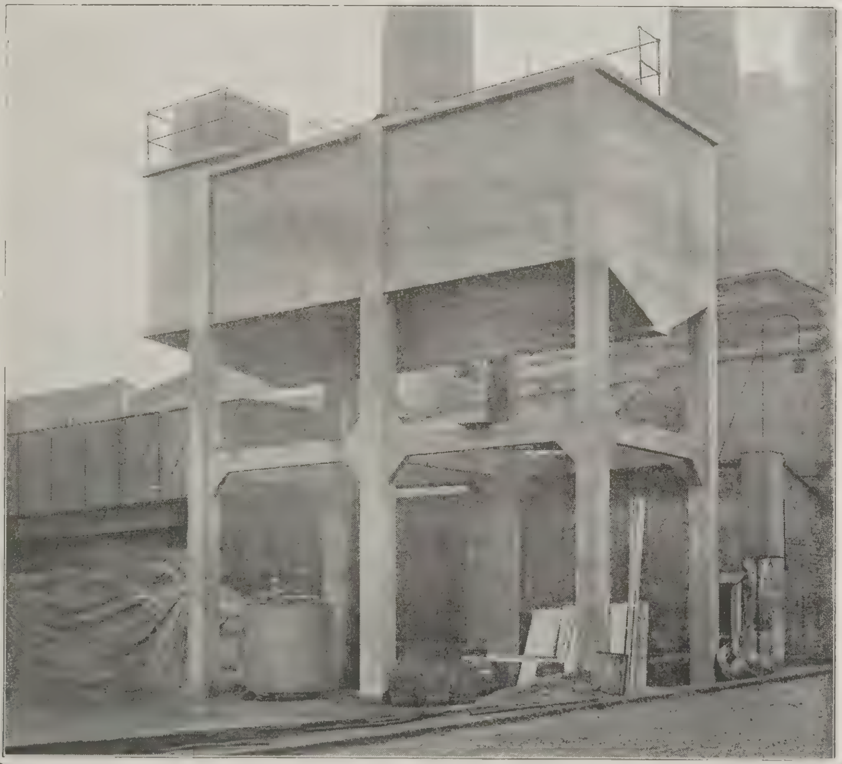

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FORTHCOMING BRITISH INDUSTRIES FAIR.

Next year's British Industries Fair, for which application forms for exhibiting space are now being issued by the Board of Trade, will be considerably larger than those of previous years. The last two fairs were held in the Victoria and Albert Museum and the Imperial Institute, and, though wonderfully successful, the space which was then available was by no means sufficient to meet the demands of the exhibitors. In many cases, in fact, exhibitors' applications for space had to be cut down by as much as 60 per cent., and the fact of the fair being in two buildings caused some inconvenience. The 1918 Fair, which will as usual open on the last Monday in February (February 25) and remain open for a fortnight, is to be held in premises which the Port of London Authority have been so good as to place at the disposal of the Board of Trade, and it is hoped that the available space will be sufficient to meet exhibitors' requirements—at any rate for this coming year—as the Fair will, owing to the war, again be restricted to the following trades: Earthenware and china trade, glass trade, fancy goods trade, paper, stationery, and printing trades, toy and games trade.

The fact that the building for next year's Fair contains about twice as much space as the Board was able to secure at the Victoria and Albert Museum is only one of its advantages. In the first place, it is more conveniently situated for business men, being near the Tower Bridge and only a few minutes' walk from Mark Lane Station on the Metropolitan and District Railways, and, in the second, the building is exceptionally well suited for the purpose of the Fair, being a large roof-lighted warehouse on one floor. Some idea of its size can be gained from the fact that its area would be sufficient to accommodate two full-sized Rugby football fields.

As in past years, invitations to the Fair will be issued by the Board of Trade, and admission will be restricted to bona-fide buyers in the trades concerned.

As the increased size of the Fair and the growing shortage of labour will make the work of preparation exceptionally difficult, it is hoped that firms who are anxious to exhibit will send in their applications for space to the Director, British Industries Fair, 10, Basinghall Street, London, E.C.2, at the earliest possible moment.

COMPETITION FOR MEMORIAL PLAQUE.

The Government is promoting a competition for designs for a memorial plaque to be presented to the next-of-kin of members of the naval and military forces who have fallen in the war. Prizes to the amount of £500 will be awarded (in proportions to be decided later) for a limited number of the most successful models. All the competitors must be British-born subjects.

The memorial is to take the form of a bronze plaque, with an area of as near as possible 18 sq. in.; e.g., it may be a circle of 4¾ in. in diameter, or a square of 4¼ in., or a rectangle of 5 in. bv 3 3-5 in. The plaque is to be produced by casting fr a model, which should be finished wi precision. All designs submitted must actual models in relief in wax or plaster the size indicated above. No competit may submit more than two models. T design should comprehend a subject and brief inscription.

It is suggested that some symbolic figure subject should be chosen, but t following inscription has been decid upon: "He Died for Freedom a Honour," and must form part of t design.

Since the surname of the person cor memorated and the initials of his Chri tian names are to be engraved on t plaque, the design should be arranged as to leave space for the name within t dimensions mentioned above. In the ca of a rectangular design this space shou be left at the base; if the design is circula a margin surrounding or partially su rounding it should be left free. T design should be essential, simple an easily intelligible.

Models must be delivered to t Director, National Gallery, Trafalga Square, W.C., not later tha December 31. Full particulars of th competition may be obtained on applica tion in writing to the Secretary, Wa Office, or to the Secretary, Admiralty.

Memorial to William De Morgan.

A tablet is to be placed in Chelsea Ol Church as a memorial of Mr. Willian Frend De Morgan, the author and artist who lived in Chelsea for many years.

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ELECTRICAL NOTES.

Germany's Faith in Electricity.

Coincident with the imminent publication of the Coal Conrvation Committee's report by the Ministry of Reconstruction, teresting discussions in Germany, of which reports have reached is country, indicate that great reliance is to be placed on tensive development of electric power as a chief agent of rapid construction of industrial prosperity. An eminent consulting igineer has favoured "Electrical Industries" with the followg pithy and emphatic comment on these designs of our princiil enemy:—

" It is true that Germany had before the war gained enormous onomic advantage by public encouragement of electrical ience, but a far greater cause of her advancement has been ır gross neglect of our own opportunities. If the war has at st opened our eyes to the terrible dangers of national ca' nny, we may comfort ourselves with the following solid unsailable facts: England is the most favourably situated country the world for deriving public and private benefit from eleccal progress. Our population is more conveniently distriited; our fuel supply is far richer and more accessible. England can, if she chooses, have a supply of electricity laid on pracally everywhere like water cheaper than can be done by ermany or any other big country on earth; and with this iceless blessing England can not only defy competition in a de range of manufacturing industries, but bring about a nderful revival of agriculture and abolish domestic drudgery. hatever Germany can do we can do twice as well in this field only our people will drop their pettifogging parochial notions electrical development and support the establishment of igle-minded administration from a broad national standpoint. doubt if any proposal of economic exclusion would strike Gerany's business chiefs with so much dismay as the news that itain had decided to cease dabbling in electricity and to make e most of her unequalled natural advantages for its unreicted application to industry."

[We do not think that these claims are much, if at all, exagrated. It is notorious that in the electrical industries almost ore than in any other branch of scientific enterprise, Britain d fallen into the traps set for them by wily Teuton traders, io have taken full advantage of our absurd habit of wasting r natural advantages; but never again!]

A List of Electrical Accessories.

We have received a copy of one of the excellently prepared lists the lamp and wiring supplies department of the British Thomn-Houston Co., Ltd. This list, which extends to over seventy ges, relates wholly to wiring installation accessories, coverg the standard types of such material in general use, *i.e.*, ring appliances, such as lampholders, switches, wall plugs, iling roses, cut-outs, distribution boards, fuse boxes, wood ocks, insulators, etc. This list is divided into five sections, ch dealing with a particular type of accessory. Each page is vided into halves, the outer half being given to the illustraons and the inner half containing the listing and description the wares. Owing to war-time fluctuations in this class of aterial, it has not been possible to include prices, but the T.H. Co. have adopted the excellent practice of issuing gular quotations each month. Among the many interesting nds of accessories shown, the following deserve special menn: A new line of porcelain type Goliath Edison screw lamplder, designed after careful study of the requirements of the lmiralty and other Government departments; new designs of ass-cased Goliath holders; several excellent types of standard yonet and Edison screw-holders in both porcelain and brassse types; the "Quiklok" cover ceiling rose, approved and indardised by the War Office (this has many points of advange over the ordinary ceiling rose, the chief being that it can wired on the bench and secured in position on the ceiling by quarter turn of the wrist); and a new pattern distribution fuse ard and a new range of insulators. Copies of this useful list ay be obtained on application to the company at Mazda ouse, 77, Upper Thames Street, E.C.4.

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LATE CONTRACTS, ETC.

BUILDING.

December 15. — **BATHROOM, Etc. Eastville, Bristol.**—Tenders are invited for the erection of a bathroom, etc., in male sick quarters at Eastville Institution in accordance with specifications and drawings. Tenders to be sent to J. J. Simpson, Clerk to the Guardians, St. Peter's Hospital, Bristol.

ENGINEERING.

January 1. — **STRENGTHENING QUAY. Southampton.**—Strengthening the outer corners of the Town Quay, Southampton, for the Harbour Board. Specification, conditions, bills of quantities, and form of tender may be obtained on application to the Board's Engineer and deposit of £1 Treasury note. Tenders to J. E. Pailthorpe, Clerk, Harbour Offices, Town Quay, Southampton.

ROADS, CARTAGE, etc.

December 14.—**ROAD MATERIAL Reading.**—Supply of broken road material gravel, and sand for the twelve mont ending March 31, 1919, for Berkshire C. Forms of tender, lists of stations a wharves, and full particulars will be fo warded by the Acting County Surveyo Tenders to A. Langston Yockney, Actin County Surveyor, Shire Hall.

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Telegraphic Address: "Buildable, Vic., London."

Telephone: ADVERTISEMENT, EDITORIAL, COUNTING HOUSE, AND PUBLISHING—6936 Victoria (2 lines).

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Reinforced Concrete

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GLASGOW: 144, St. Vincent Street.

Lattice and Keedon SYSTEM

LEGAL.

Dilapidations : Important Judgment.

Ross v. McConnell.

November 29.—Official Referee's Court: Before Mr. Muir Mackenzie.

In giving judgment in this action the Official Referee said that the action was brought by Mrs. Fanny Sarah Ross, the owner of 8, Collingham Gardens, Kensington, against Mr. Arthur John McConnell, the late tenant, in respect of breach of covenants of a lease in respect of repairs and dilapidations. There was also a claim for the replacement of certain fixtures. The figures, according to the plaintiff's schedules, worked out at £405 12s. 6d. as the amount necessary to put the premises in repair and £103 6s. as the value of the fixtures. There was also a claim of £70 for rent. The premises were a large house which, at the time it was taken on lease by the defendant, was in a high state of decorative repair. In 1903, when defendant was arranging for the lease, there was a certain amount of repair and redecoration required. They were also decorated in a particular style, and defendant was desirous of modifying the scheme of decoration. On October 27, 1903, in anticipation of the lease being carried out, an agreement was entered into by which it was provided that the tenant was to be allowed to make certain alterations and the lessor was to contribute towards the cost. The rental was to be £450 a year, and the first term expired in December, 1904. There was a proviso in the lease that the lessee should not be required to redecorate except so far as to put them in the same decorative repair as they were in when the lease was granted. This proviso should not be considered as to relieve the lessee from any obligation to paint, paper, etc., in the years mentioned specifically for the purpose, in the event of the years so specified being coincident with the determination of the demesne. In 1910 a fresh lease was taken to expire at the end of September, 1931, with the option of terminating at earlier periods upon notice. The repairing covenants were the same as those previously in force, and there was the proviso that the tenant should not be required to redecorate except to put the premises in the same condition as they were in 1903. The tenancy came to an end on June 24, 1916, by a year's notice. The plaintiff's claim was that the premises were out of repair beyond the exception provided for. The figures of experts called for the plaintiff for these repairs amounted to £405 12s. 6d.; but the evidence for the defence put the amount at a much lower figure. The actual result of the evidence for the defence was that the figures worked out for making good the dilapidations at £62 9s. 6d. and for fixtures at £90. The defendant, on entering into possession, did a large amount of work. About £1,000 was spent in repairs and decorative work, and about £900 was spent on other work. During the tenancy large sums were spent from time to time for upkeep and the fulfilment of the obligations of the lease. He could not doubt that Mr. McConnell amply fulfilled the obligations, but he did not do any extensive decorative work after 1911. On the plaintiff's side the surveyors and builders called had made out schedules which specified the work which had to be done, but they did not specify the actual state of the premises. The evidence given on the plaintiff's side was not clear as to the exact amount and the actual nature of the defects complained of. The defendant had paid £225 into Court, which was sufficient to meet the claim. His judgment was for the defendant, and that the £225 in Court be paid out to the plaintiff. The plaintiff would have the cost of the action up to the date of the payment into Court, and the defendant would have the costs after that date.

Judgment was accordingly entered for the defendant, with costs as stated.

THE AMENDMENT OF BYE-LAWS.

With regard to the points on which the bye-laws usually in operation in (a) urban and (b) rural areas should be amended in order to permit of the adoption of new ideas in building construction, a Committee of the Conference of the National Housing and Town Council (see p 269) is considering in close detail the question of the amendment of Bye-laws. This Committee has presented an interim report, and the members of the Conference have approved and adopted the following recommendations contained in this report:—

(1) That where areas of land are being developed for the housing of the working classes the provision of the bye-laws with respect to new buildings shall be modified so that such buildings may be erected in the manner which may be decided by the Local Authority with the approval of the Local Government Board.

(2) That Clause 20 of the Model Bye-Laws should be slightly amended to provide that the slates mentioned should be a double course laid to break joint and embedded top and bottom in cement. The surface of the ground mentioned to be "finished" surface.

(3) That for Clause 21 of the Model Bye-Laws Clause 18 of the Rural Model Bye-Laws should be substituted on the ground that this permits a much greater discretion where stability is secured.

On this point the members of the Conference have submitted the following resolution:—

"That this Conference is of opinion that a Bye-Law should be drafted to allow the external walls of domestic buildings to be constructed of suitable materials other than bricks, masonry, or concrete, provided that the walls of such domestic buildings are of sufficient stability and the buildings suitable in all respects for human habitation."

(4) With regard to the height of rooms the 8 ft. limit of the Model Bye-Laws is approved both for ground and upper floors. The minimum height of windows should on the ground floors be not less than 7 ft. to the uppermost portion. On the first floor the minimum height of window should be 6 ft. from the floor level. In the case of rooms wholly or partly in the roof, the area of the room should be measured at a level of 5 ft. above the floor, and for at least two-thirds of such area the height should be 8 ft. (This will save the necessity of filling in a space below the 5 ft. mentioned above if the plate level is less than 5 ft. above the floor.)

Ventilation should be provided at the highest point of the ceiling to all rooms. It is further suggested that the rules as above with respect to rooms in the roof should apply also to mansard roofs.

When the War is over

the huge building operations that are already provided for, and the many others that will arise, will bring such a time of prosperity to the Architectural and Building World as has not been known for many years.

The essential policy of every careful business man is to foresee his requirements for that time and to make provision therefor.

One of those requirements will assuredly be advertising space, and very shortly after peace there will be great pressure on the advertisement pages of technical publications.

Most firms will find it necessary to augment their business announcements in order to emphasise that their factories have reverted to the production of their pre-war specialities.

A certainty of the near future is a considerable rise in advertising rates.

Every adjunct to publishing—composition, printing, paper, blocks, &c.—has increased in cost enormously, and these increases will of necessity be reflected in advertising rates.

Contracts are being made to-day at pre-war rates and manufacturers who place contracts now not only benefit largely immediately, but still more largely when the pressure comes.

They will make certain, too, of getting their announcements published—a matter of considerable importance, as already there is a great scarcity of paper, and supplies will not be equal to requirements for a long time after the war ends.

Every paper will be compelled strictly to limit its pages, and it may be impossible to provide space for new advertisers.

These are matters well worth discussing immediately with

The Advertisement Manager,

The Architects' and Builders' Journal,

27-29, Tothill Street, S.W.

OBITUARY.

Brigadier-General Stokes-Roberts.

Brigadier-General E. R. B. Stokes-oberts, C.B., R.E., who died on active ervice on November 22, was born in 1865 nd educated at Clifton College. He assed into the Royal Engineers in 1884 nd saw much service in India, having aken part in the Burmese Campaign in 887 (medal with two clasps) and with he Hazara Expedition in 1888. On the utbreak of war he was C.R.E. at Mhow, ndia. He proceeded to Mesopotamia, was promoted brigadier-general and director of works, and, after being twice mentioned in dispatches, received the C.B. his year, together with the Russian Order of St. Anne with Crossed Swords. He was an engineer officer of conspicuous bility. One of the pioneers of the reinorced or ferro-concrete method of buildng, he invented several improvements nd published a book on the subject in 909. Brigadier-General Stokes Roberts married in 1886 the niece of Sir Arthur Helps, Private Secretary to Queen Vicoria. He leaves two married daughters nd one son, a major in the Worcesterhire Regiment, but now commanding a attalion of the Lancashire Fusiliers.

Mr. J. P. White.

We regret to have to announce the eath of Mr. J. P. White, of The Pyghtle Works, Bedford. Mr. White had been n failing health for several months, and ecame seriously ill during the last few ays before his death. He was sixty-two ears of age. Mr. John Parish White was orn at Takeley, in Essex, in 1855, and erved an apprenticeship with Mr. Edward Twelvetrees, builder, of Biggleswade. Mr. White first went into business on his own ccount as a builder at Dunmow, in Essex, and was there for a few years. He went to Bedford thirty-three years ago, and ook over the building business of Mr. ohn Hull. Mr. White built a good deal f house property in the town, chiefly on he Beckett Estate, and he also built the Conservative Club and the Provident Dispensary in St. Peter's. The Pyghtle Works were founded by Mr. White and uilt in 1896, with the idea of specialising n the manufacture of wood chimney-pieces, for which Mr. White perceived here was a demand which could be fosered by artistic workmanship, and his productions became very fashionable. This business was just what was wanted in Bedford to encourage the young carvers in he Art School, and to give opportunities or cunning workers in wood and stone. Mr. White was a most genial-tempered and benevolent-minded man, and it was a pleasure to him to give an opportunity and a helping hand to a youth starting in life. Other developments followed in course of ime, and the Pyghtle Works became known far and wide, not only in this country but on the Continent, and in the British Dominions beyond the Seas, for he manufacture of garden furniture and ornaments. It was a characteristic trait of Mr. White's love of the country, both in his native and in his adopted counties, hat he should name his house and place of business "The Pyghtle"—a familiar word in Essex, and very well known in he Midlands—and that he should also give o the various styles and patterns of his productions the picturesque place-names ound in this locality. It was the finding of a garden seat, some hundred years old, n a Norfolk vicarage, which first gave Mr. White the idea of making garden furniture. That seat was called the "Peacock," and its instant and rapid sale led to the designing and making of other seats, chairs, tables, trellis work, summer-houses, arbours, pergolas, gates, and many other forms of garden furniture, which will be found adorning the most famous and beautiful of our English homes. In time the making of stone and lead work was added, and Italy was drawn upon for Tuscan pottery, flower boxes, vases, well-heads, etc. A shop in New Bond Street was taken, and the business grew continually. Mr. White took an obvious delight in it, and in the beautiful work which he so carefully and understandingly directed. Naturally he came into contact with all sorts and conditions of men up and down the country, and obtained an intimate knowledge of English gardens and estates and their owners. Another interesting branch of the business was the manufacture of panelling and the decorative woodwork of interiors. Some very important undertakings were carried out in this connection, notably at the Municipal Buildings of Stockport, Hull, and Cardiff.

The firm of Messrs. J. P. White and Sons, Limited, was formed in 1911, and included Mr. White's two sons, Messrs. James and John White, and Mr. Edmund Walker, J.P., whose daughter married Mr. James S. White in June, 1905. The deceased is survived by his wife, two sons, and three daughters. Mr. White was for a few years a member of the Bedford Town Council, the County Council, and the Harper Trust. He was elected to the Town Council at the head of the poll for the East Ward at a memorable election on November 1, 1904, and was re-elected in 1907. He was always approachable and sociable, and nothing delighted him more than to gather small parties of his innumerable friends on his bowling green at The Pyghtle, of which all who ever visited it will have fragrant memories. Mr. White resigned most of his public appointments, for business reasons, towards the end of 1908. He was, however, a member of the War Pensions Committee, a Commissioner for Income Tax, and a member of the Advisory Committee for selecting Borough Magistrates. An editorial note on Mr. White's services to architectural amenity appears on p. 264.

THE LATE MR. J. P. WHITE, OF THE PYGHTLE WORKS.

RURAL HOUSING.

The following is the text of a letter signed by Sir C. T. Dyke Acland (president), Mr. D. Wilmot Buxton (chairman), and Mr. A. Churton (secretary), and addressed by the Rural Housing Association, Parliament Mansions, Westminster, S.W.1, to Mr. Hayes Fisher, M.P., President of the Local Government Board:

We would earnestly ask your consideration of the following resolution which has been passed by the Executive Committee of the Rural Housing Association:

"That in view of the acknowledged fact that there is urgent need for a largely increased number of cottages, and that the efforts of all those agencies which have hitherto built cottages will be required if the need is to be supplied, the Executive Committee of the Rural Housing Association are of opinion that any financial facilities granted by the Government to local authorities and public utility societies should, in rural areas, be extended, under proper safeguards, to individuals who are able and willing to build cottages.

"The safeguards to include the following:

"(1) That in areas where no modern building bye-laws are in force, full investigation should be made by the central authority into the bona fides of the person proposing to build, also into the suitability of the site, and of the plans, specifications, and materials.

"(2) That the tenancy of these cottages should be restricted to persons of the labouring class.

"(3) That the rents should be equitably regulated by the central authority.

"The Committee further desire to express their opinion that in purely rural districts, as a rule, not less than a quarter of an acre of land should be provided for each cottage."

The offer made by the Government to local authorities of substantial financial assistance for a limited period, for cottage building after the war, should bear good fruit in stimulating the activity of these bodies. If, however, the need is to be fully met, the co-operation of private enterprise is essential, as is recognised in the Board's circular of July 20 to local authorities, and the special conditions arising out of the war have, generally speaking, made it as impossible for private enterprise as for public bodies to build cottages unaided. We would therefore ask that the same financial assistance should be granted to it as to local authorities; and this, not only to public utility societies, but, under proper safeguards, to that individual effort which has been the most powerful factor in supplying cottages in the past.

We would submit that urban and rural housing problems are widely different and call for different treatment. Further, the conditions of rural areas vary so greatly that their housing needs can only be satisfactorily met by allowing an elasticity of system which will include all responsible cottage building agencies.

During the fifteen years of its existence, the Rural Housing Association has done its utmost to promote cottage building both by rural district councils and by private enterprise. Now, in view of the extreme urgency of the situation, we would strongly urge upon the Government that they should extend their proffered help—for a limited period and under proper safeguards—to individual as well as to corporate effort.

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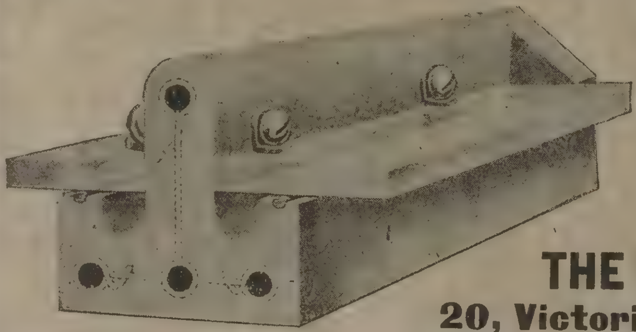

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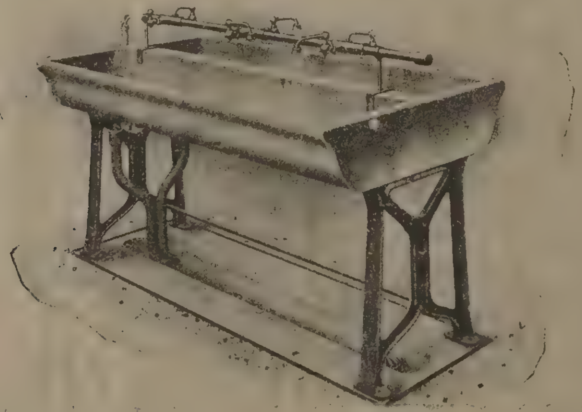

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December 28.—**DWELLINGS. Dublin.**—Erection of dwellings and execution of other work on the McCaffrey estate, Mount Brown, Dublin, for the Housing Committee of the Corporation, in accordance with plans, specifications, and conditions of contract prepared by T. J. Byrne, A.R.I.B.A., which may be inspected at his office, 1, James's Street, Dublin. Copies of bills of quantities and forms of tender may be obtained at the office of the City Treasurer, Municipal Buildings, Cork Hill, Dublin, on deposit of £2. Tenders to be sent to the Chairman of the Housing Committee, City Hall, Dublin. Sureties required.

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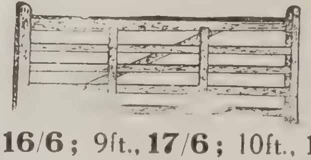

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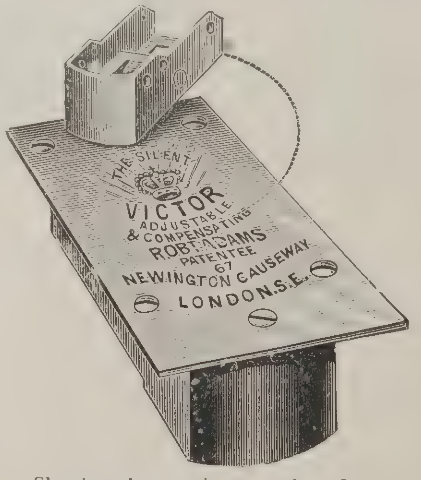

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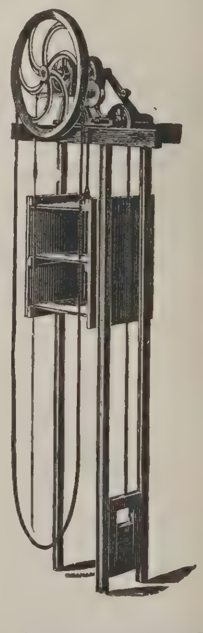

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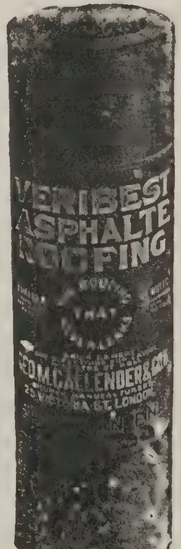

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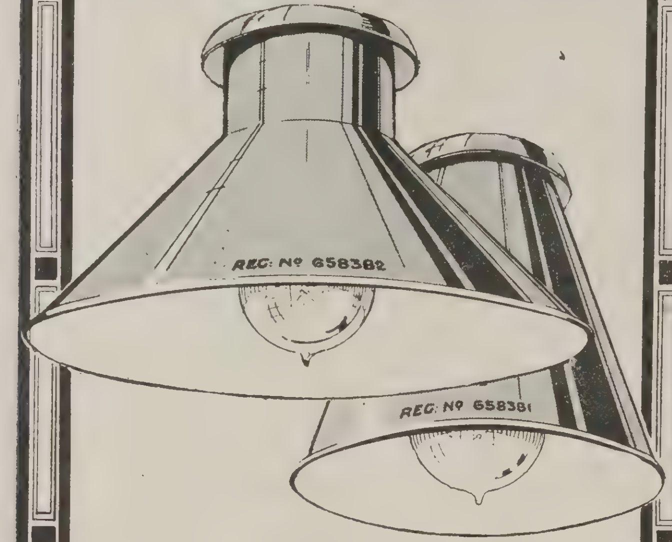

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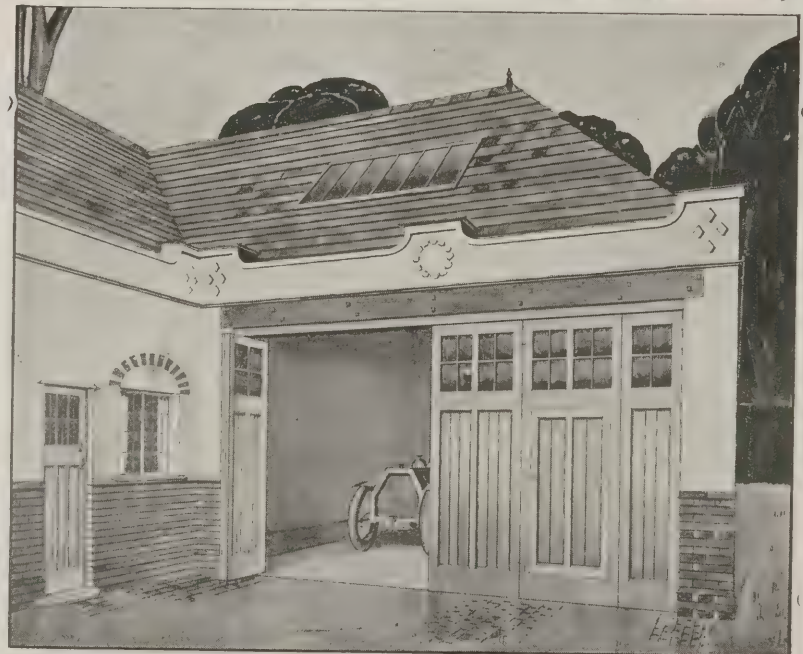

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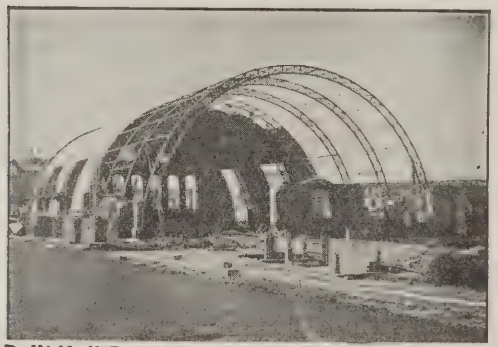

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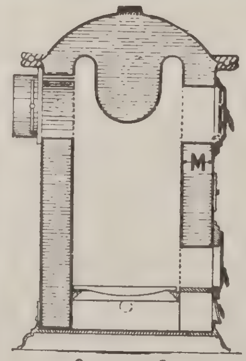

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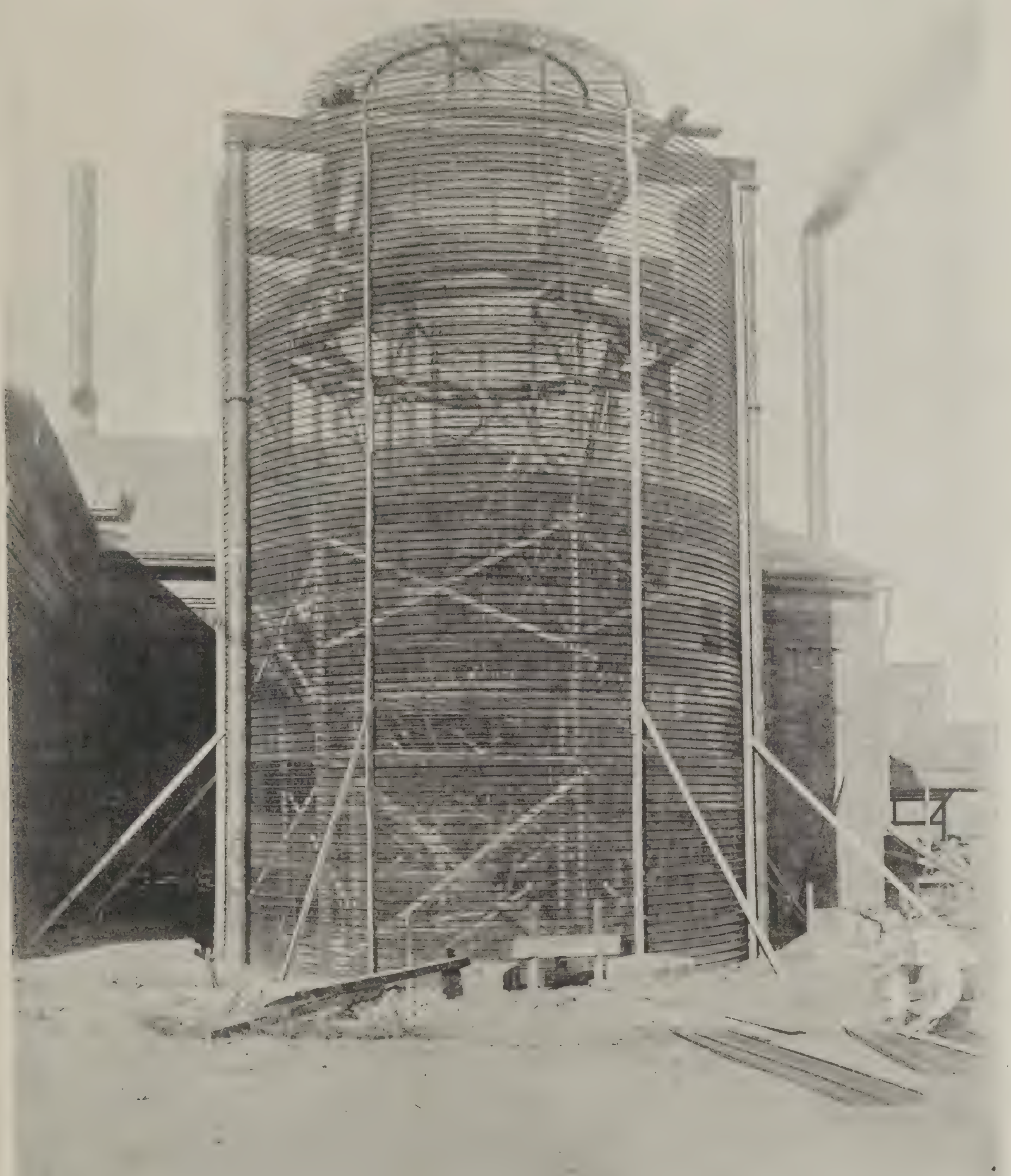

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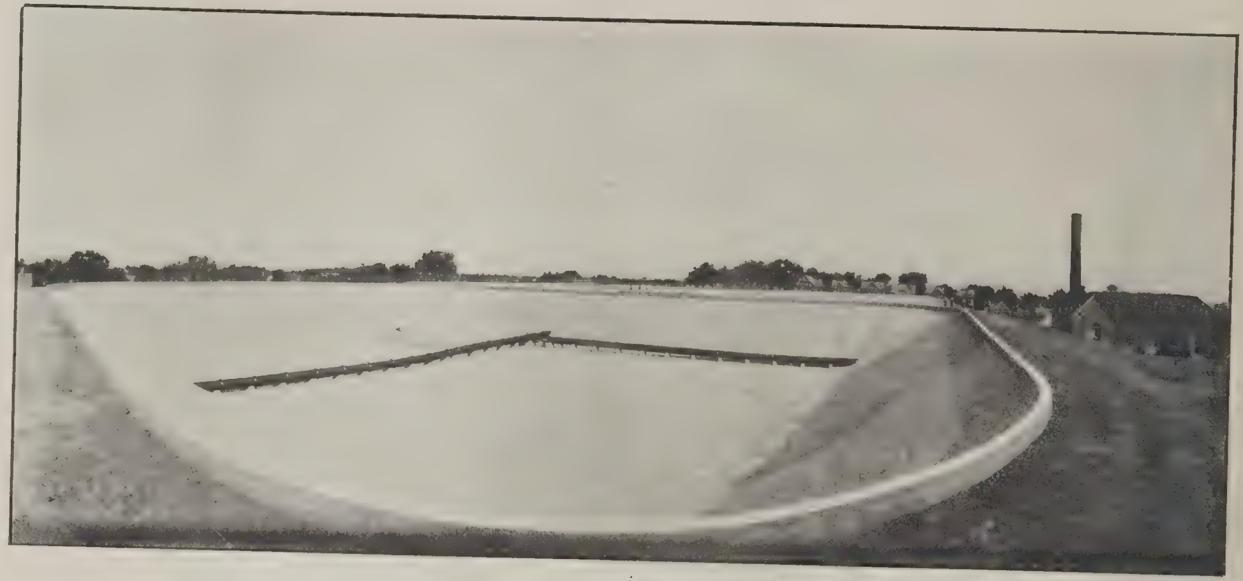

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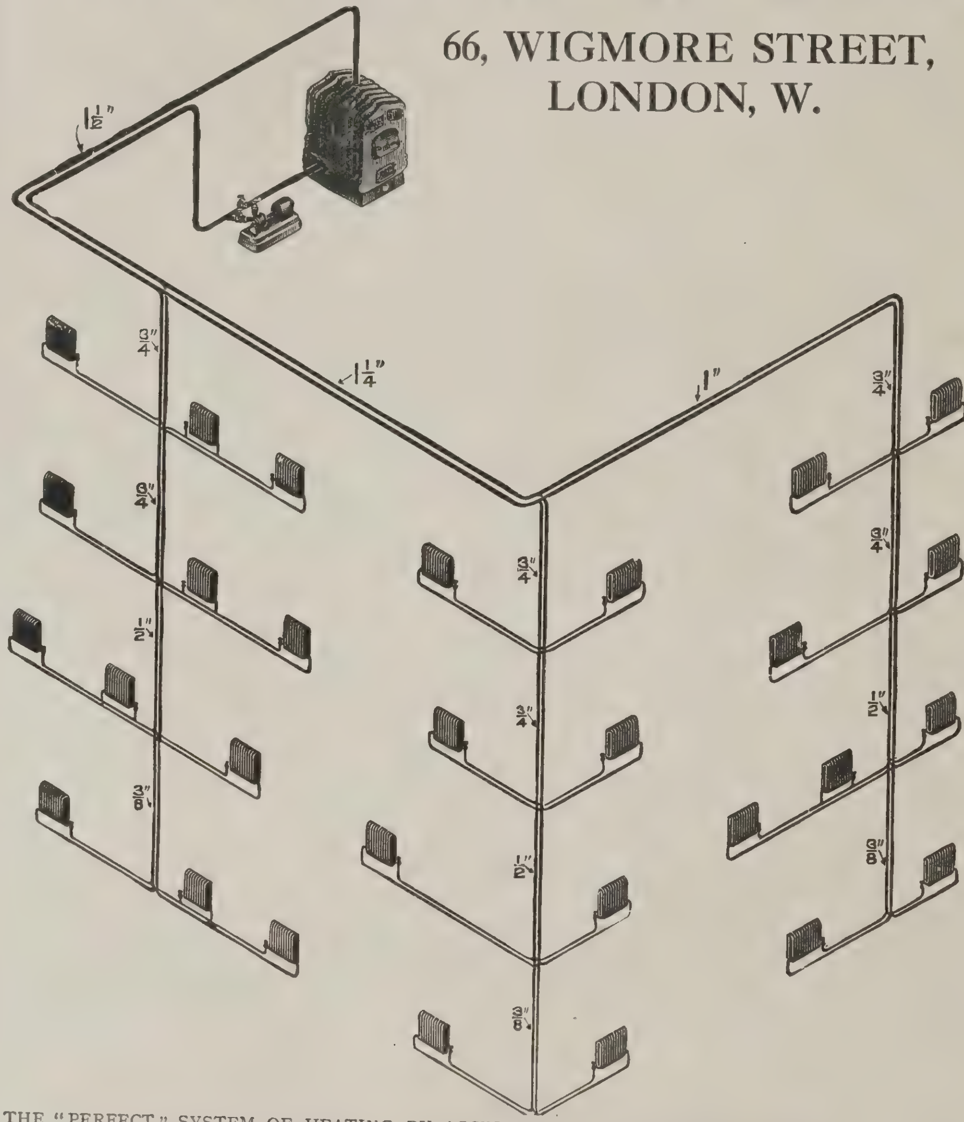

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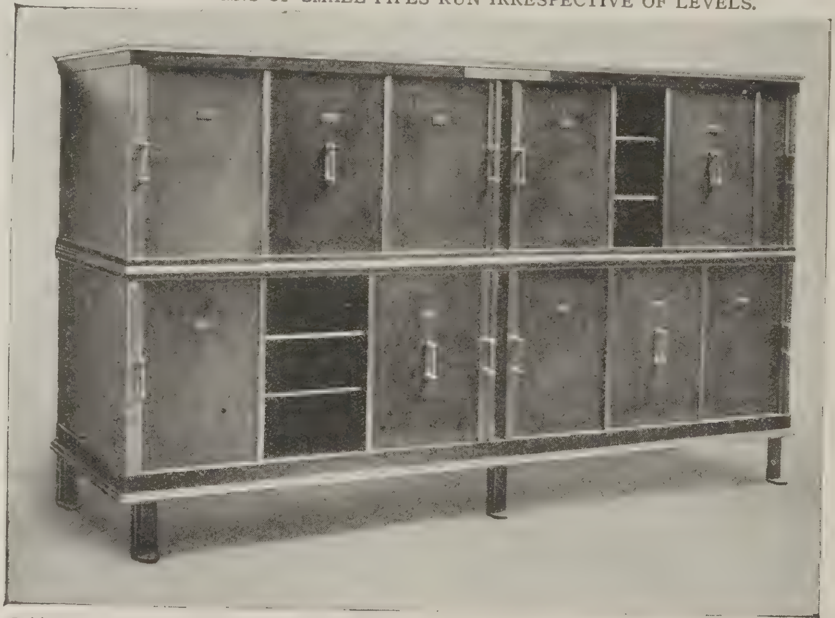

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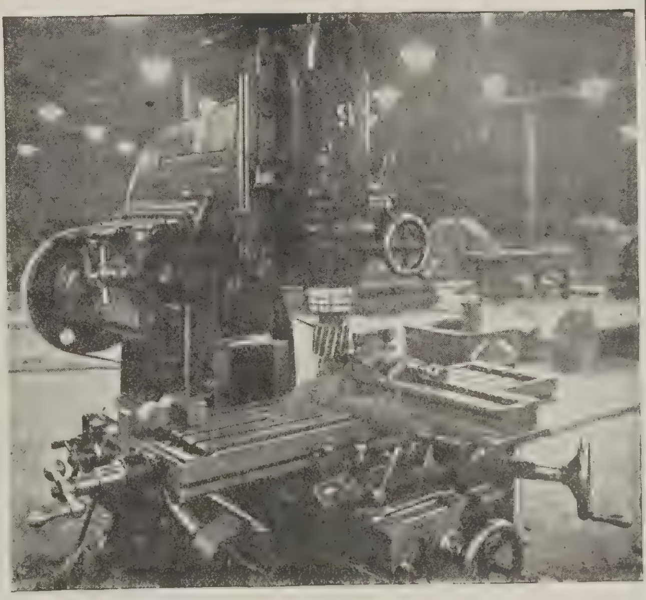

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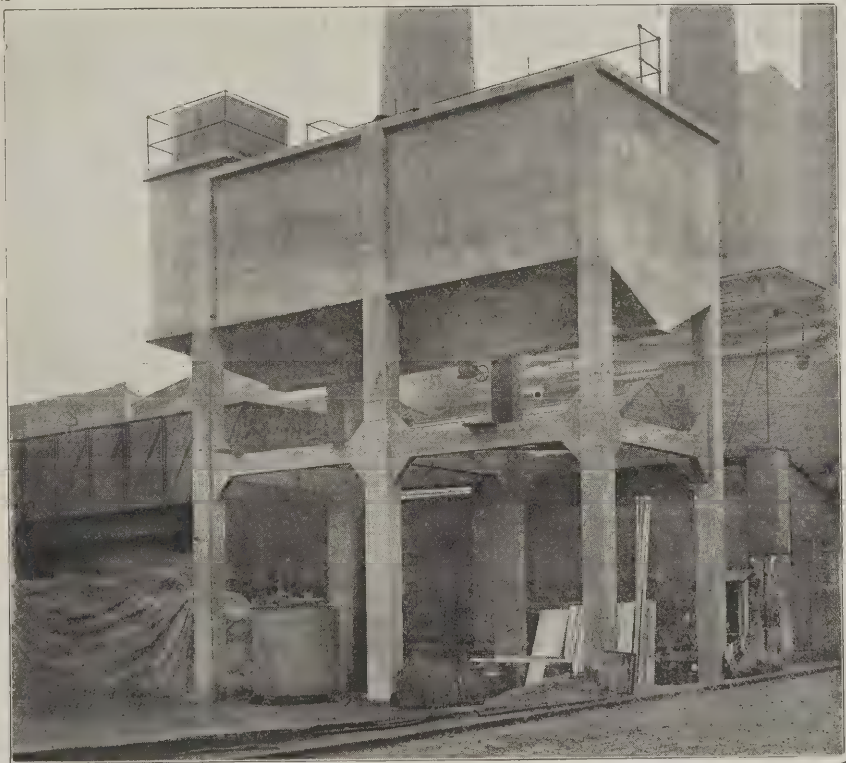

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MR. ARTHUR FELL, M.P., who has long known as an ardent advocate of the prop Channel Tunnel between England and Fra has published, through Messrs. Hugh Rees, Ltd. 5, Regent Street, S.W., a pamphlet entitled " British Government and the Channel Tunnel." *raison d'être* of this pamphlet is the answer which given in the House of Commons on August 16, 19 by Mr. Bonar Law, to Mr. Fell's question concern the Government's attitude towards the introductio a Bill giving the necessary powers to begin operati immediately after the war.

Mr. Bonar Law said: " The Cabinet have again ca fully considered the question, in consultation w their naval and military advisers, and they are stil opinion that it is not practicable to proceed furt with the matter during the continuance of the W In these circumstances, it would not be possible the Government to support a Bill of the nature in cated in my hon. friend's question."

Mr. Fell in his pamphlet makes out an excell case for the early adoption of a definite scheme. T engineering and commercial problems connected w the Tunnel have long been familiar, and have produ no criticism which has remained unanswered. Acco ingly, Mr. Fell confines himself to a general discuss of the scheme in its political, military, and psych logical aspects.

"We cannot think," he writes, "that the opini of the Admiralty bears much on the subject. It w the War Office which—mainly because of the person hostility of Lord Wolseley—opposed the scheme thir years ago, and it was War Office opposition alo which then prevented its construction. No doubt t Admiralty will be able in the future to protect o communications with France as they have done su cessfully during this war, although at a vast expend ture of money and shipping, which might have be otherwise employed. But it is not the Admiralty th will decide the question when once the Governme comes into line with public opinion. The House Commons Committee would not have pressed the pr posal upon the Government at the time they did ha they not been convinced that it was in the interests Great Britain and her Allies, one of the most vit matters that could be undertaken after the war—com mercially the most important of all, in order to enabl us to increase our trade, and to cope with the grea financial liabilities which we shall have incurred— strategically the most essential to enable us to mee any future war problems that can possibly arise, and politically, as the bond to cement the alliance of England and France and to remain for all time an objec lesson to the world.

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